

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

Title: BRIEFING ON STATUS OF PROPOSED RULE ON LICENSE RENEWAL

Location: ROCKVILLE, MARYLAND

Date: JANUARY 30, 1990

Pages: 74 PAGES

SECRETARIAT RECORD COPY

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF PROPOSED RULE
ON LICENSE RENEWAL

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PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Tuesday, January 30, 1990

The Commission met in open session, pursuant to notice, at 2:00 p.m., Kenneth M. Carr, Chairman, presiding.

COMMISSIONERS PRESENT:

KENNETH M. CARR, Chairman of the Commission
THOMAS M. ROBERTS, Commissioner
KENNETH C. ROGERS, Commissioner
JAMES R. CURTISS, Commissioner
FORREST J. REMICK, Commissioner

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STAFF SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

JAMES TAYLOR, Executive Director for Operations

ERIC BECKJORD, Director, Office of Research

DR. THOMAS MURLEY, Director, Office of Nuclear Reactor
Regulation

DR. WARREN MINNERS, Deputy Director, RES/DSIR

DONALD CLEARY, Senior Task Manager, RPSIB, RES

WILLIAM TRAVERS, Chief, Emergency Prep. Branch, NRR

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

2:00 p.m.

CHAIRMAN CARR: Good afternoon, ladies and gentlemen.

The purpose of today's meeting is for the NRC staff to brief the Commission on the status of rulemaking on license renewal. The Commission was last briefed on the subject of license renewal rulemaking on June 22nd, 1989. In October of 1989, the Commission agreed to hold a public workshop to discuss the NRC staff's preliminary, regulatory philosophy, a conceptual license renewal rule and a schedule.

Today, the staff plans to brief the Commission on the comments provided at the workshop and discuss a proposed course of action and schedule for license renewal activities. I understand that comments received during and subsequent to the workshop indicate general agreement with the staff's regulatory philosophy and approach to license renewal.

During the meeting, I would ask staff to focus on those areas where there are divergent views and explain the basis for the staff's position on these issues.

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1 staff's paper, SECY-90-021, are available at the
2 entrance to the meeting room.

3 Do my fellow Commissioners have any opening
4 comments?

5 If not, Mr. Taylor, please proceed.

6 MR. TAYLOR: Good afternoon. With me at the
7 table, starting from my far right, from the Office of
8 Research, Don Cleary, Warren Minners, and the
9 Director, Eric Beckjord. To my left, Tom Murley and
10 Bill Travers from the Office of NRR.

11 The regulatory approach that the staff
12 proposes for license renewal is founded on two key
13 principles. The first principle is that the current
14 licensing basis at a specific reactor provides and
15 maintains a level of safety for operation during the
16 initial term, which is sufficient to provide adequate
17 assurance of public health and safety, and that the
18 same level of safety is also adequate for continued
19 operation during any renewal period.

20 The second, and equally important, principle
21 is that any license renewal policy must provide
22 assurance that the level of safety provided by a
23 nuclear power plant's current licensing basis will not
24 degrade during the renewal period.

25 With those two principles, I'll now turn the

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1 meeting over to Eric Beckjord from the staff for
2 presentation.

3 MR. BECKJORD: Thank you.

4 Mr. Chairman, Commissioners, we're
5 presenting to you today the report on the license
6 renewal workshop of November 13th and 14th of last
7 year and the proposed revision to the program plan and
8 schedule for rulemaking. The full report is included
9 in the Commission paper, SECY-90-021, dated January
10 17th, 1990.

11 Mr. Taylor has already stated the basic
12 approach. I'll go on and say that the workshop was
13 attended by more than 200 representatives of industry
14 and we received their views on the many aspects of
15 this important endeavor.

16 We're recommending changes in the program
17 plan as a result of what we heard at that meeting. We
18 are accepting some of the positions suggested by
19 industry representatives and standing firm on others.
20 The program plan is a better one for having held that
21 meeting.

22 The schedule of the program is tight. The
23 staff is resource limited for this activity and faces
24 a considerable challenge to meet the proposed
25 schedule. We intend to do everything reasonably

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1 possible to meet that schedule. We do not have much
2 margin to respond to upsets or additional requirements
3 beyond what we've described in the paper.

4 With that, I think we're ready to proceed.

5 Mr. Minners?

6 DOCTOR MINNERS: (Slide) Could I have the
7 second slide, please?

8 I think the objective, Eric has already
9 stated it.

10 (Slide) And on the third slide, this lists
11 the topics to be discussed, to go over these subjects
12 and we'll end up with the important part of it, which
13 is the program plan and schedule that the staff now
14 proposes to follow.

15 (Slide) On the fourth slide is a general
16 outline of the workshop which was noticed in the
17 *Federal Register* in October 13th and it's Enclosure 1
18 to the Commission paper. The agenda of the workshop
19 focused on aging and that was the subject of the
20 discussions. But also included was a conceptual rule,
21 a previous version than the one that's included in the
22 Commission paper. That was discussed also at the
23 workshop.

24 The workshop sessions are described in
25 Enclosure 2 to the paper and it was held on November

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1 13th. As I said, focused on aging and it was a
2 cooperative exercise by NRR and Research and OGC, and
3 they were generally co-session leaders or co-leaders
4 of each session as appropriate. The co-leaders
5 developed sets of questions which were put into a
6 packet and distributed to attendees and then these
7 were used during each session to lead people and kind
8 of guide the discussions.

9 Three hundred people were invited to the
10 workshop. About 200 attended. They, of course, were
11 mostly industry people from NUMARC, the utilities,
12 nuclear steam supply system vendors,
13 architect/engineers, lawyers to the industry,
14 consultants. We, of course, had NRC staff there.
15 There were some NRC contractors there because they're
16 doing some work at license renewal for us. We had a
17 public interest group, the Nuclear Information and
18 Resources Group. We had another federal agency, DOE
19 attended, and people from four states attended. The
20 press was represented and we had one investment
21 counselor.

22 There was a transcript of the meeting taken
23 and, in addition to that, 12 written comments were
24 submitted by various attendees. These are being
25 reviewed and a report is being developed that

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1 summarizes the workshop. And the staff will also
2 produce a second report which will give the staff
3 responses to each of these summarized comments. These
4 reports will be part of the package that's submitted
5 along with the rule when it's presented to the
6 Commission and put out for public comment.

7 (Slide) May I have the fifth slide, please?

8 Of the many comments that were given at the
9 workshop, we believe at this time there are eight
10 major issues which I'd like to discuss. They are
11 discussed in more detail in Enclosure 3 to the paper.

12 (Slide) The first issue is on slide 6 and
13 it's what we call the generic environmental document
14 which is the critical path in the schedule. Both the
15 technical work required to do the document and the
16 procedural aspects of doing things at certain times
17 makes up the critical path.

18 COMMISSIONER REMICK: Excuse me, Warren. Is
19 there any significance to the use of the word
20 "document" versus "report"? One usually thinks of an
21 environmental report and I see this is environmental
22 document. Any significance attributable to that?

23 DOCTOR MINNERS: I'm not a big man on
24 environmental law, but I understand environmental
25 report is usually reserved for the report that the

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1 licensee produces in his plant. We call this a
2 document because we don't know whether to call it an
3 assessment or an impact statement or maybe it will
4 just be some kind of a document that's referenced. I
5 guess its legal status is not entirely settled at this
6 time how we're going to use it. So, we've tried to
7 give it a kind of amorphous name that doesn't mean
8 anything at the moment.

9 COMMISSIONER REMICK: Is this the first
10 we've used that terminology? Just curiosity.

11 MR. PARLER: As far as I know. The
12 explanation that Mr. Minners gave is essentially
13 correct, at least as I understand it. It isn't clear
14 yet whether an assessment will do the job or whether
15 an environmental impact statement would be required.
16 If you call something an environmental impact
17 statement, there's an established routine that you
18 have to go through. So, the approach here is to find
19 out a little bit more what the Agency would have to
20 have to do the requisite job to comply with NEPA and
21 then proceed. It's kind of like a -- so, it's being
22 used for that purpose.

23 COMMISSIONER REMICK: So, it's
24 characteristics are more like an environmental impact
25 statement or assessment versus an environmental report

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1 that a licensee might submit?

2 MR. PARLER: That's true.

3 COMMISSIONER REMICK: I see. Okay.

4 DOCTOR MINNERS: We're writing the document
5 and the only question is what label to put on the
6 front page.

7 Since it's the critical path, we were trying
8 to find some way of speeding up the proceedings. In
9 the previous SECY paper, 89-275, we presented Option
10 2, which decoupled the license renewal rulemaking from
11 the environmental rulemaking. That's what we're
12 proposing to do now. So, what we intend to do is to
13 work two separate paths. One will be a Part 54
14 Rulemaking which will supplement the current 5051 rule
15 for license renewal, and provide standards and
16 procedures for license renewal and applicants. There
17 will also be some conforming changes to 2.109, 50.109
18 and 51.20. This rulemaking will be supported by an
19 environmental assessment which is essentially done at
20 this time, and the objective is to have this rule out
21 in May of '91 so that it will be in place before we
22 receive the first license renewal application from
23 Yankee-Rowe.

24 Now, in parallel with that is the
25 environmental rulemaking. This will be supported by

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1 this generic environmental document. The schedule--
2 the limitations, first of all, we have to go out for a
3 *Federal Register* notice with a notice of intent and
4 follow some procedural things. Then just, as I say,
5 the work to develop this document means that we can't
6 get it done until April of '92. But that will be
7 before we issue the first license.

8 The industry supports our goals in producing
9 the generic environmental document. That is to try to
10 generically take care of as many environmental issues
11 as possible in that document and not have to litigate
12 them in each individual license renewal.

13 But they want to have a license renewal rule
14 issued before the first application is tendered in
15 June of '91. So that -- we're all agreed that that's
16 what we're going to try to do. And as Eric said,
17 that's a tough schedule and doesn't have much slack in
18 it, but we're going to try to do it.

19 COMMISSIONER CURTISS: Warren, two questions
20 on the approach. You've indicated that you haven't
21 yet decided whether there'll be significant
22 environmental impacts in the Part 51 rulemaking.
23 Presumably what you're looking at now is an
24 environmental assessment-type review, even though you
25 call it a GED here. In proceeding down that path, are

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1 you, from the standpoint of issues like scoping of the
2 EIS process, are you treating this as if it's an EIS
3 so that if you get to the stage where you find that
4 significant impacts will, in fact, result, but in turn
5 require an EIS, you will have done all those
6 procedural steps along the way?

7 DOCTOR MINNERS: That's correct, yes.

8 COMMISSIONER CURTISS: Okay.

9 COMMISSIONER REMICK: Warren, I'm not sure I
10 understand why rulemaking is required for Part 51.
11 What in 51 needs to be revised?

12 DOCTOR MINNERS: Well, Part 51 now requires
13 an impact statement to be written. We are changing
14 the Part 51 to allow an environmental assessment to be
15 made. That's proper, if we can make that finding.
16 But I think the bigger thing is is that what we are
17 trying -- not so much what has to be changed, is that
18 we want to provide a generic rule that takes care of
19 these issues and we don't have to do it in individual
20 cases.

21 COMMISSIONER CURTISS: I take it what you're
22 looking at is an S type table that would plug into
23 Part 51?

24 DOCTOR MINNERS: Yes.

25 COMMISSIONER CURTISS: The same kind of

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1 concept?

2 DOCTOR MINNERS: That concept, yes.

3 (Slide) On slide 7, is a discussion of the
4 regulatory guides that will be in support of
5 rulemaking. These will be on a separate schedule
6 which will be not accelerated along with the Part 54
7 rulemaking, and it will be more on a schedule like the
8 Part 51 rulemaking.

9 We now are working on a regulatory guide
10 which will provide the format and content for license
11 renewal and applications. The Commission should see a
12 draft of this in December of '90 and then with a
13 review and approval process and comment period, that
14 will allow it to be issued in April of '92, about the
15 same time that Part 51 is finalized. This delay is
16 necessary because you can't really write the format
17 and content document until you know what the rule is
18 going to contain. So, the rule's draft will be out in
19 June of '90 and so then we can really begin to write
20 this reg. guide.

21 Another very important guidance for license
22 renewal is a screening method. This is to go through
23 and determine which components are safety related, are
24 subject to degradation and need additional programs to
25 assure that their degradation is not detrimental.

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1 This screening method report is being developed by
2 NUMARC. In fact, they submitted it last October. Our
3 intent is to review it and issue an SER endorsing it
4 or modifying it as necessary and then that will become
5 the licensing guidance that applicants can use.

6 COMMISSIONER REMICK: It seems to me that
7 that particular document could be subject to
8 challenge. What are you doing from the staff's
9 standpoint to make sure that that's as thorough
10 analysis and consideration as can be given so that
11 later challenges would not be successful to it?

12 DOCTOR MINNERS: Well, I think we're giving
13 it as good a technical review as we can and that would
14 be documented in the SER. I guess that's similar to
15 the way that we have done other topical reports and
16 the way that we have done applications. And the
17 defense of the report, I guess, will have to be from
18 the SER.

19 COMMISSIONER REMICK: How broad is that
20 review within the staff? Do you have an internal peer
21 committee of -- how do you assure that you get
22 adequate staff review of this?

23 DOCTOR MINNERS: Well, I think we're sending
24 it to all of the technical branches in both Research
25 and in NRR and getting people's comments in that way.

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1 We have -- so, it's getting all a wide breadth of
2 technical review.

3 MR. TRAVERS: I might just add that in
4 addition to that, we're also going to the ACRS for
5 review of each of these documents. We're going to be
6 interacting with them in all stages of these reviews.

7 COMMISSIONER ROGERS: Excuse me. That
8 report, is that the one that's entitled, "Methodology
9 to Evaluate Plant Equipment?"

10 MR. TRAVERS: No, sir.

11 COMMISSIONER ROGERS: No?

12 COMMISSIONER CURTISS: Let me ask a related
13 procedural question on that. If it -- as I understand
14 your intention, the bulk of the screening process will
15 be set forth in one of these reg. guides. Does that,
16 in turn, mean that the -- even subject to the scrutiny
17 that the technical staff gives the document, that the
18 decisions that are made on screening, which would be a
19 very critical part of the process, are, in turn,
20 subject to litigation of the proceeding, that it'd be
21 fair game for the proceeding?

22 MR. PARLER: I suppose since the magic word
23 "litigation" was mentioned, that I, instead of Doctor
24 Minners, should answer the question or try to answer
25 the question. I think that if the product of the

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1 screening effort, as I understand it, are supposed to
2 be technical aids, degradation requirements in a new
3 Part 54. Those requirements, after they go through a
4 rulemaking proceeding, would not be subject to
5 challenge and litigation in an individual plant
6 renewal proceeding.

7 However, as you may recall, we have another
8 provision in our rules that provide for somebody to
9 try to challenge, and it's kind of difficult, an
10 existing regulation because of special circumstances.
11 I assume that the kind of background question that you
12 asked might be the predicate for somebody to try and
13 show special circumstances and that therefore the
14 existing regulatory requirements were not adequate to
15 deal with the special circumstances and therefore the
16 procedures in 275(a) should be evoked.

17 COMMISSIONER CURTISS: Okay.

18 COMMISSIONER REMICK: It wasn't clear to me,
19 however, that the screening methods would be in the
20 rule. Is that the intent?

21 DOCTOR MINNERS: A requirement to have a
22 screening method would be in the rule, but the details
23 of the screening method would be in this report.

24 COMMISSIONER REMICK: The technical
25 requirements would be in the report and that's why I

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1 thought that might -- if not thoroughly done, it might
2 be subject to challenge at a later date.

3 COMMISSIONER CURTISS: I take it it would be
4 subject to challenge.

5 DOCTOR MINNERS: I would think so.

6 COMMISSIONER CURTISS: If the requirement to
7 have a screening process, which is a simple statement
8 that there shall be a screening process, is what the
9 rule contains with the details of what the screening
10 process entails set forth in a reg. guide, I take it
11 while the rule itself cannot be challenged except
12 under rare circumstances, that the actual process of
13 going forward and applying the reg. guide for
14 screening to an individual plant would be fair game in
15 the adjudicatory proceeding.

16 DOCTOR MINNERS: Well, it certainly would be
17 part of the staff's technical review, whether we agree
18 with their screening.

19 COMMISSIONER CURTISS: Okay.

20 DOCTOR MINNERS: In addition to this report,
21 the industry is developing ten other technical reports
22 which discuss the aging management requirements for
23 other components, like the vessel, the containment,
24 things like that.

25 We have received two of these already and we

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1 are scheduled to have them all by August of '90.
2 That's a recent revision of the industry schedule and
3 we're working on a schedule to review these and we're
4 going to have a meeting next week to try to set that
5 schedule on the review of the reports which will then
6 be used in license applications and can be referenced
7 by applicants as the way that they're going to do
8 their aging management.

9 COMMISSIONER REMICK: Excuse me. Go ahead.

10 CHAIRMAN CARR: I notice you shifted the
11 responsibility for those from Research to NRR. Can
12 you --

13 DOCTOR MINNERS: The review of those?

14 CHAIRMAN CARR: Yes.

15 DOCTOR MINNERS: Yes, sir.

16 CHAIRMAN CARR: Why did you see fit to do
17 that?

18 DOCTOR MINNERS: Well, I'm not sure of all
19 the reasons. I think that NRR has both the technical
20 expertise and probably a closer perspective on
21 licensing requirements than Research does. I don't
22 know if NRR wants to make a comment on --

23 CHAIRMAN CARR: Well, am I wrong? Is there
24 not Research back-up required to make those figures?

25 DOCTOR MINNERS: Research is -- NRR is the

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1 lead in that and Research is participating in it. We
2 are giving them our technical review, yes. But the
3 lead is in NRR.

4 CHAIRMAN CARR: I guess my concern is that
5 we get enough interaction in there that we don't miss
6 our dates of who's waiting on whom, you know. I know
7 if Research has got both ends of the ball, I can point
8 to him. But if I start to beat on him and he says,
9 "Research is holding me up," I'm going to worry.

10 MR. TAYLOR: They're both staff. We'll work
11 on it.

12 DOCTOR MURLEY: Typically, NRR is the
13 responsible office for issuing SERs. Of course
14 we've --

15 CHAIRMAN CARR: But the one up above you
16 won't be primarily responsible for it, right?

17 DOCTOR MURLEY: The Guide on Format and
18 Content?

19 CHAIRMAN CARR: No, the screening report.
20 It was my understanding you're only on the ten at the
21 bottom. Is that right?

22 DOCTOR MURLEY: No.

23 CHAIRMAN CARR: NRR's got all of them?

24 DOCTOR MINNERS: All of the industry reports
25 are --

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1 CHAIRMAN CARR: Okay.

2 MR. BECKJORD: Ten reports plus the
3 screening.

4 DOCTOR MINNERS: Research is doing the reg.
5 guide on format and content.

6 COMMISSIONER ROGERS: Just before you leave
7 that topic, are there -- how do those topics get
8 decided upon that those reports are being written?
9 How did that list get generated and do you expect any
10 additions to that list?

11 DOCTOR MINNERS: Well, I think that's one of
12 the things that we have to decide and whether there
13 should be additions to the list. People have to
14 decide that we've covered all of the important
15 components and issues.

16 COMMISSIONER ROGERS: Is this an industry
17 initiative to begin with --

18 DOCTOR MINNERS: Yes, it was.

19 COMMISSIONER ROGERS: -- and offered to
20 produce the list and --

21 DOCTOR MINNERS: Yes, sir.

22 COMMISSIONER ROGERS: So we're taking them
23 as they come in? I'm just a little unclear as to what
24 the process is that's at work here.

25 MR. BOSNAK: Commissioner Rogers, my name is

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1 Bob Bosnak of Office of Research.

2 CHAIRMAN CARR: I missed your name.

3 MR. BOSNAK: One of the things that we've
4 been talking about -- pardon me?

5 CHAIRMAN CARR: I missed your name.

6 MR. BOSNAK: It's Bob Bosnak, Office of
7 Research.

8 Our Division has been responsible for the
9 ANPR Program, the aging research program. One of the
10 reasons why the Office of Research is involved is that
11 we've been doing and interacting with the contractors
12 performing the research on where things degrade, how
13 fast they degrade, what's important to look at. So,
14 those things are involved.

15 We've talked with the industry several times
16 about whether or not the topics that they have are the
17 right ones. You could cut the area a different way
18 and look at things like fatigue, but they've decided
19 to cover those in all of their reports. So, there are
20 a lot of different ways of looking at it. We hope by
21 the time we're all through that everything will be
22 covered.

23 COMMISSIONER ROGERS: Well, but that just
24 leaves me a little uncomfortable. Do you have to wait
25 until the end of the process to make that decision?

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1 Do you have to get all the reports in to decide
2 whether you have an adequate collection or not? Isn't
3 it possible to reevaluate this as you go along --

4 MR. BOSNAK: These are the critical areas.
5 I think we've identified those as being the critical
6 areas. So, on that, we're happy. It's a question of
7 whether or not each of the reports will cover key
8 areas. That we're not sure of until we see the
9 reports.

10 COMMISSIONER REMICK: Before leaving this
11 area, I had two questions. I had a concern related to
12 Chairman Carr. I shouldn't say concern, but an
13 observation, also noting that NRR was going to be
14 doing this. But I kind of leaned in favor of that
15 because I think NRR is familiar with licensing
16 reviews. But it does raise the questions where you
17 have two offices involved in the same thing and that's
18 coordination and management of that. Have you
19 considered anything like a task force or anything to
20 make sure that time schedules are met and people know
21 who is reviewing what at what time, since there are
22 two offices involved?

23 MR. BECKJORD: Well, we have that. Doctor
24 Speis is taking the lead on this and Bill Travers, I
25 believe, is going to be performing in that role for

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1 NRR.

2 COMMISSIONER REMICK: They have the
3 authority from the EDO to --

4 MR. TAYLOR: Yes.

5 COMMISSIONER REMICK: -- knock heads and so
6 forth as necessary?

7 MR. TAYLOR: I help.

8 COMMISSIONER REMICK: All right. Good.

9 Another question. You indicated you
10 received two of these industry reports. Based on a
11 preliminary evaluation, do you have any views on
12 adequacy or thoroughness or anything that we should
13 know at this time?

14 DOCTOR MINNERS: Well, I don't think there
15 are any fatal flaws in the reports. I think the staff
16 has come up with some very usual kind of comments.
17 That would be my impression.

18 Bob, do you have a different view?

19 MR. BOSNAK: No. I agree there are no fatal
20 flaws. I think the things that we have to go back
21 on -- there's two that we've looked at. One is a
22 containment and the other is a BWR vessel. The
23 degradation mechanisms, we think, in both reports are
24 very well covered. Some of the criteria on which the
25 individual plants will have to take action are not

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1 well covered and those are the things we have to
2 interact with NUMARC on.

3 CHAIRMAN CARR: Thank you.

4 DOCTOR MINNERS: All of this licensing
5 guidance here will be also supported by SRPs, which
6 will be used by the staff during the application
7 review to guide the staff on how to use this guidance.

8 (Slide) Another subject which I think the
9 Commission also has a great interest in is the use of
10 probabilistic risk assessment in license renewal. I
11 think everybody agrees that PRA is useful. We believe
12 now that no PRA requirement specifically for license
13 renewal purposes will be required in the rule. The
14 basis for this is that the method for incorporating
15 time dependent aging failure rates into a PRA is still
16 evolving, which makes these PRAs even more uncertain
17 than our snapshot PRAs. Also, there are no criteria
18 that people have agreed to on how to use the results
19 of the PRA, what components or systems would be
20 identified as being in need of attention.

21 But this does not mean that PRA won't be
22 around. As you know, all of the licensees must do an
23 individual plant examination and that will be
24 available. A later slide discusses severe accident
25 closure.

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1 COMMISSIONER REMICK: Excuse me. I
2 certainly agree. I don't see a need for a PRA
3 requirement list, but it seems to me if you did have a
4 PRA you could feed into that different estimates of
5 aging and see what importance that might have to
6 reliability of a system or to risk and so forth. So,
7 it seems to me that, one, if you have a PRA it
8 certainly might be useful to analyze the importance of
9 aging information.

10 MR. BECKJORD: We will have the PRA through
11 the independent --

12 COMMISSIONER REMICK: IPE, yes.

13 MR. BECKJORD: -- plant examination, which
14 will be completed --

15 COMMISSIONER REMICK: Yes.

16 MR. BECKJORD: -- before this.

17 COMMISSIONER REMICK: I just wanted to make
18 sure we didn't belittle PRA possibilities of providing
19 useful insight of aging.

20 DOCTOR MINNERS: We believe it's useful, but
21 we believe it's a little too uncertain to have as a
22 requirement.

23 COMMISSIONER REMICK: Yes, I agree.

24 DOCTOR MINNERS: (Slide) On slide 9, this
25 is the current licensing basis which Mr. Taylor

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1 discussed and Eric discussed. The guiding principle
2 here is that the current licensing basis, except for
3 age-related degradation concerns, is sufficient to
4 assure adequate protection in the renewal term as well
5 as in the current license.

6 At, I guess, a lot of the behest of OGC, we
7 are now in a large effort to write up a demonstration
8 that this is so, that the current licensing basis will
9 continue to be adequate in the renewal term. We
10 expect to have an extensive discussion in the *Federal*
11 *Register* notice statement of considerations that
12 demonstrates this.

13 MR. PARLER: May I make one comment, since
14 he said at the behest of OGC? It seems like it's just
15 a needless -- I'm sure you didn't intend this -- but a
16 needless legalism, a waste of scarce resources.

17 As I understand it, the objective here, of
18 course, is not only to have renewed plants which could
19 operate safely, et cetera, but to arrive at that
20 result without having the need to litigate unduly
21 specific either environmental issues or technical
22 issues in the individual plant life extensions. In
23 order to reach that result, if somebody wants to
24 challenge it, you have to have something better than
25 simply a statement that the staff believes that the

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1 current licensing basis is adequate, period. The
2 other side might say they don't believe that it is,
3 "Let's litigate it."

4 So, what the lawyers are trying to have done
5 is to have in the explanatory statement a rationale as
6 to why the current licensing basis is adequate.

7 MR. TAYLOR: The staff considers that good
8 guidance too. We intend to do that.

9 DOCTOR MINNERS: No, I didn't mean to
10 belittle the comment. It was just that we didn't give
11 it the proper emphasis until it was brought to our
12 attention.

13 MR. TAYLOR: It was pointed out to us as a
14 fault. We agree.

15 COMMISSIONER ROGERS: Are you going to say
16 more about that or are you going to turn to something
17 else?

18 DOCTOR MINNERS: Well, I was going to make
19 one more statement. The current licensing basis, we
20 are going to have a requirement in the rule that there
21 be a description of the current licensing basis in the
22 application. We believe this can be done mostly by
23 reference to things like the updated final safety
24 analysis report and we believe that this listing of
25 the current licensing basis in the application is

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1 necessary so that the requirements of the current
2 license are identified clearly and can be carried
3 forward in the renewal term.

4 COMMISSIONER ROGERS: I just -- the SECY
5 left me a little question in my mind as to whether it
6 was something I was not fully appreciating in that on
7 page 6 you stated, "The version of the conceptual rule
8 provided for the workshop required a description of
9 the current licensing basis in a license renewal
10 application and a staff determination that the basis
11 has been completely and accurately described."

12 And then you later on said, "Now, staff
13 proposes that applicants describe the current
14 licensing basis in their application."

15 DOCTOR MINNERS: Correct.

16 COMMISSIONER ROGERS: And then you go on to
17 say that, "Staff now believes that a determination of
18 completeness and accuracy is not necessary because
19 each license renewal applicant must perform a plant
20 evaluation."

21 So, I'm trying to understand how you're
22 going to judge the acceptability of the current
23 licensing basis statement if you don't apply some kind
24 of standards of completeness and accuracy and just how
25 you propose to deal with that. Do you think that what

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1 you've included in the conceptual rule in the latest
2 version that you gave us that the Part 54.23 standards
3 for issuance of a renewed license in the conceptual
4 rule, do you think that's sufficient? Is that what
5 you're going with now? I'm trying to understand what
6 the difference is between looking for completeness and
7 accuracy in the description and what it is that you're
8 going to look for.

9 DOCTOR MINNERS: Well, I think that's the
10 big change from the previous version of the rule. I
11 don't think that now we believe that the staff has to
12 do a review of that licensing basis. We expect the
13 applicant to provide a complete and accurate
14 description of the licensing basis. We believe that
15 that can be done and that in order to do his screening
16 procedure, the starting point is really his licensing
17 basis. So he has to know what his starting point is.
18 So, we think that there will be a good review and
19 evaluation of that licensing basis by the applicant
20 and it's not necessary for the staff to do that.

21 COMMISSIONER ROGERS: Well, do you think
22 there's going to be any question about what basis you
23 will find something acceptable and not acceptable,
24 whether there's a question in the minds of the
25 licensees or the applicants as to what you'll be

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1 looking for?

2 DOCTOR MINNERS: Well, I think the rule does
3 define what should be submitted as part of the current
4 licensing basis, if that's what you mean. I think
5 that's a fairly good description of what is required.

6 COMMISSIONER ROGERS: Well, it's really just
7 a question of completeness and accuracy, to what
8 extent you're going to make that judgment.

9 DOCTOR MINNERS: As I say, the staff is not
10 going to do a review. So, I don't think we have any
11 specific standards set forth in that, no.

12 DOCTOR MURLEY: Except, Commissioner, we did
13 put the language in 54.15 in an attachment that describes
14 what we expect to see in applications in terms of the
15 identification of the current licensing basis. So, we
16 took out that language and instead put in the draft
17 rule what we expect to see.

18 COMMISSIONER CURTISS: I guess I come at it
19 from a different angle. I think it's a move in the
20 right direction from what you originally circulated.
21 As I understand it, we're now going to require the
22 licensee to certify the current licensing basis in his
23 application. I take it that the principle here is
24 that it's not the current licensing basis that we're
25 concerned about litigating here. We are assuming,

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1 subject to the generic description in the statement of
2 considerations, that the current licensing basis in
3 fact provides adequate protection to public health and
4 safety.

5 The question I guess I have, coming at it
6 from a different angle, is if that's true, why is it
7 that we need to require submission of all the
8 information, even by reference, if we don't intend to
9 examine those questions? To put it differently, with
10 all that information sitting in there in the
11 application, doesn't that, in effect, invite the
12 licensing board to ask why it's in there and, in turn,
13 ask whether it's accurate?

14 DOCTOR MINNERS: Well, I think we probably
15 look at it -- and maybe this is a legal opinion I'm
16 not qualified to give. But if we're giving them
17 essentially a new license, and I understand that's the
18 legal theory behind it, I think the staff used it as
19 that you ought to have a good description of what the
20 licensing basis is to start out with. I think that's
21 about the sum of it.

22 MR. PARLER: And not to leave that basis to
23 one's imagination, to have the -- there are the old
24 FSARs, et cetera, that may have been issued 15 or 20
25 or 30 years ago, but let the licensee, the applicant

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1 in its application, at least reference what it
2 believes the licensing basis is.

3 COMMISSIONER CURTISS: That leads though to
4 the point that Commissioner Rogers raised, and that is
5 how do you know that it's accurate and complete and
6 thorough and necessarily leads into a discussion, not
7 just from the staff's technical review, but in the
8 proceeding itself, as to the adequacy of the current
9 licensing basis? Isn't that the result of opening
10 that door and asking for all that information to be
11 put on the table?

12 DOCTOR MINNERS: Well, as I said, I think we
13 do have some assurance that it will be complete and
14 accurate, but we're leaving that assurance mainly up
15 to the licensee through his plant evaluation that he
16 has to do. We're putting most of the responsibility
17 where we believe it should be, on the licensee.

18 CHAIRMAN CARR: It's certainly not going to
19 be the same for every plant.

20 DOCTOR MINNERS: No. That's correct. We'll
21 have 100 different licensing bases at least.

22 COMMISSIONER ROGERS: Well, I'm still
23 uncomfortable here because I don't know what you're
24 going to do with it. Are you going to weigh it? Are
25 you going to count mines? It's there. What will you

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1 do with it? I mean, you say you're not going to
2 examine it. What will you do with it?

3 DOCTOR MINNERS: I don't think it's what we
4 the NRC do with it, Commissioner, that makes much
5 difference. It's what the licensee does with it is
6 the important thing. He's the one responsible for
7 safety. I would presume he would look at his
8 licensing basis and be assured that he is meeting his
9 licensing basis and that when he goes further, that he
10 knows what his starting point is for this screening
11 method that he's going to do. He has to have a
12 starting point someplace and he has to have the
13 licensing -- he has to gather this information anyway,
14 and all we're asking him is to do the administrative
15 task of making a list of it and sending it into us,
16 which we think is not much of a burden.

17 COMMISSIONER CURTISS: I guess I presume
18 that he'll do that with that big room full of
19 documents that he's got, wherever he's got his
20 licensing basis. When he submits the application,
21 he'll go to that big room full of documents and use
22 that as the point of departure. I presume we know
23 what the licensing basis is for these plants.

24 Well, the question is, assuming they'll do
25 that, because it's a prudent and wise thing to do, and

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1 assuming we know what the licensing basis is and that
2 this isn't for our benefit, what is the purpose of
3 then requiring that big room of documents to be
4 transported down here to the Commission?

5 DOCTOR MINNERS: Well, it's not going to be
6 the big room of documents. It's only going to be a
7 list of those documents that has to be transported.

8 COMMISSIONER CURTISS: I understand that.

9 CHAIRMAN CARR: I think it's just a contract
10 between the two parties at the time that says, "This
11 is where we start it."

12 DOCTOR MURLEY: If I may add, I think we
13 could, no doubt ourselves, reconstruct this licensing
14 basis for each plant, but it would take a lot of work.
15 When we say the current licensing basis, we mean not
16 just the FSAR, but all the commitments they've made to
17 us, all the small exemptions that they've gotten from
18 parts of regulations and so forth. We want to make
19 sure, because some of these actions go back, as the
20 General Counsel said, 20 years or more. We want to
21 make sure that we have the same understanding about
22 what's required of that plant right now that the
23 licensee does.

24 Now, we don't intend -- we're not committing
25 that we review every document, but we will look them

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1 over. No question that we will look over to make sure
2 that we have the same understanding that the licensee
3 has of what's required.

4 COMMISSIONER ROGERS: Well, does this mean
5 that you'll -- I'm just trying to -- I'm not being
6 critical. I'm just trying to understand what this
7 process is here that we're envisioning. It sounds to
8 me as if you'll look over the list of documents to see
9 whether the list is complete. Not whether the
10 contents of the documents are complete, but whether
11 the list is complete. Is that correct or not? Do you
12 intend to do that or not do it?

13 DOCTOR MURLEY: My intention now is that we
14 would be doing some selective look into the documents
15 themselves, just to satisfy ourselves that what we
16 understand the current licensing basis is the same as
17 they've described it.

18 COMMISSIONER ROGERS: Well, I've had some
19 experience in the past in which a licensee didn't
20 really know what its commitments were that it made and
21 had to go back and reconstruct those and found that it
22 had made some that the NRC didn't even know about at
23 the time. And I just wonder how we're dealing with
24 that kind of thing. Are we going to review the list
25 of topical -- the topical list, or the names of the

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1 documents, see whether it's complete or not? Are we
2 just --

3 CHAIRMAN CARR: You want the books at least
4 balanced.

5 COMMISSIONER ROGERS: All I want to know is
6 what we're going to do first, and then I'll criticize
7 it later. But I don't know, when we say we're not
8 going to examine that list for completeness, does that
9 mean we're not going to look at the completeness of
10 every document, or does it mean that we're not going
11 to look at the completeness of the list itself?

12 DOCTOR MURLEY: Oh, we're going to look at
13 the completeness of the list, yes. And for example,
14 it could very well be that we're familiar with the
15 latest update of the FSAR, so we could decide, well,
16 yes, we agree. We've looked at that and we don't need
17 to look at that. But there could be some list of
18 commitments that they've made to us that our memory
19 may be a little foggy on. We may go in and look at
20 that in some detail to make sure that our records
21 agree with theirs in terms of what's --

22 COMMISSIONER ROGERS: Well, that was what I
23 wanted to find out about, because I couldn't tell from
24 what was said whether we were going to look at the
25 completeness of that list or not.

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1 MR. TAYLOR: The possibility does exist.
2 There would be some commitment that he made that was
3 not executed and not incorporated, and then that would
4 certainly be a problem. That would be an inadequacy
5 in the current condition. I mean, that's a
6 possibility, considering the numbers of modifications,
7 changes, and commitments that have been made over the
8 period of the current license.

9 COMMISSIONER ROGERS: Sure.

10 MR. TAYLOR: -- recognize that. And I think
11 some of these would be a template. That is, here is
12 the listing and there'd be a commonality of generic
13 issuances that people have committed to that we would
14 expect to see across a whole series of licenses. On
15 exception, we may see something that has not been, and
16 you may call up and say, "Didn't you commit to that
17 bulletin of 1969 or '75 or something?" And so, that
18 has those possibilities, but it's --

19 COMMISSIONER CURTISS: If we anticipate that
20 problem arising, that's probably a good thing to do
21 for all of our licensees, not just those that are
22 applying for plant life extension.

23 MR. TAYLOR: I think we're going to learn
24 when we do this. But it would be part of the
25 gathering together to seek a renewal.

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1 COMMISSIONER CURTISS: This provides a
2 procedural opportunity to get that information,
3 undertake that kind of review. What I was groping
4 for, though, is what the nexus is between plant life
5 extension initiative and the process of going back and
6 actually evaluating whether everybody's complied with
7 the commitments that might be spread out in the
8 various documents, some of which we're familiar with
9 and some of which --

10 CHAIRMAN CARR: Well, I think it's fair to
11 say that plants are scrambling right now to put this
12 thing together to figure out what their licensing
13 basis is.

14 COMMISSIONER REMICK: It seems to me it
15 would be beneficial for the licensee and for the NRC
16 to know what the licensing basis is. Has any thought
17 been given, though, to whether it should be a part of
18 the application or something independent of it? I
19 think that was the point Jim was getting at.

20 COMMISSIONER CURTISS: That's my point. It
21 seems to me that by the -- the plant life extension
22 process, obviously, is a potentially useful vehicle
23 for doing a lot of things. But I guess I wonder if we
24 are concerned about the problem of clearly identifying
25 where the commitments have been made and whether

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1 they've been met. That's a generic problem, unrelated
2 to plant life extension, although plant life extension
3 may provide a vehicle.

4 I think we need to consider in more detail
5 just what the nexus is between the findings that we're
6 trying to make in plant life extension; the point of
7 departure for those findings, which is the current
8 licensing basis; and the need to get these documents
9 either delivered or referenced in whatever the
10 licensee's submit. That concern is compounded by what
11 I think will be some proclivity on the part of the
12 participants to the proceeding in the Board itself to
13 look at the application, which will include references
14 to the current licensing basis.

15 And where there may be questions that arise
16 in your mind, there may be questions that arise in the
17 Licensing Board's mind or in the mind of others. And
18 we may find ourself very quickly litigating questions
19 about the adequacy of the current licensing basis or
20 commitments made thereunder, rather than focusing on
21 what I think ought to be the principal focus of the
22 plant life extension, which are the technical
23 questions relating to age considerations.

24 MR. TAYLOR: We understand that. We'd like
25 to avoid it. Maybe as we proceed here --

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1 COMMISSIONER CURTISS: Well, think about a
2 way to do that between now and --

3 MR. TAYLOR: And we're still dealing with
4 the concept, as you can tell.

5 COMMISSIONER CURTISS: That's all I have.

6 CHAIRMAN CARR: Well, they're like the bank.
7 They send us a statement. We may want to balance it
8 before we say okay.

9 MR. TAYLOR: Before we open our account.

10 CHAIRMAN CARR: That's right.

11 COMMISSIONER REMICK: Before we leave the
12 subject, one last question. Am I correct that ideally
13 with tech specs -- and if people updated their FSAR,
14 which I believe is annually -- if you had those two
15 documents, ideally you should have the licensing
16 basis, shouldn't you? Is there anything -- shouldn't
17 commitments be in there, ideally?

18 DOCTOR MINNERS: Well, if they're at a
19 higher level, they would be. But if you have some
20 very detailed commitment that you're going to have
21 some nut and bolt put in place, I mean, that might not
22 get in the FSAR or the tech spec.

23 COMMISSIONER REMICK: So it takes more than
24 a --

25 MR. TAYLOR: It takes more.

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1 DOCTOR MINNERS: (Slide) Can we go on to
2 slide 10?

3 This is the issue of severe accidents. As I
4 discussed, there will be individual plant
5 examinations, but there is not now any requirement in
6 the rule for having severe accident closures
7 completed. We consider severe accident closure to be
8 part of the current licensing basis, and any results
9 of the IPE will be dealt with in that context and that
10 will change the licensing basis so that at the time of
11 application severe accidents should be concluded. But
12 that will not be a required action in the rule.

13 However, we do intend to -- we expect the
14 IPE results to be either implemented or scheduled
15 before an application is tendered. We intend to
16 emphasize that in the statement of considerations.

17 COMMISSIONER CURTISS: Will that be a
18 prerequisite for issuance of a plant life extension,
19 commitment to schedule?

20 DOCTOR MINNERS: I guess I'll have to say
21 what I said before. It's not a requirement, but it's
22 an expectation.

23 COMMISSIONER CURTISS: I was confused about
24 the language, the difference between a standard and a
25 prerequisite that was used in the earlier draft.

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1 DOCTOR MINNERS: Well, if it's not in the
2 rule, I guess we can't require it, if that's what you
3 mean by a prerequisite. But I think NRR is going to
4 strongly urge people to have severe accidents closed
5 before we deal with their application. And I think
6 the argument would be that if you don't have severe
7 accidents closed, you don't know what your licensing
8 basis is, so we don't know where we're starting from.

9 (Slide) On slide 11, one of the more
10 important things is this screening process, and the
11 industry had some comments at the workshop that we had
12 not given adequate credit for existing programs in our
13 formulation of the rule. So we have modified the rule
14 to give more credit for existing programs.

15 And the industry was also concerned that the
16 license renewal rule not become a de facto maintenance
17 rule, and we agree with that. That is a little
18 difficult to follow, but we are trying to follow that
19 path, but would note that a maintenance rule or reg
20 guide or some industry initiative would be very
21 helpful in license renewal to define maintenance
22 practices in the renewal term as well as in the
23 current term.

24 And the details of the screening process, as
25 I think we've discussed, will be in this industry

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1 screening report, which we intend to review and issue
2 an SER on.

3 (Slide) Slide 12 is the perennial question
4 of backfit. The industry comments at the workshop
5 were that they would like to have the backfit rule
6 apply to the renewal application. And our advice from
7 OGC is that the backfit rule is not applicable to the
8 application. It's treated as kind of a new license.
9 You start it off fresh. And the backfit rule does not
10 apply. Of course, after a renewal license is issued,
11 the backfit rule would apply if we want to put any
12 additional stuff on after the license was issued.

13 The staff does recognize a need to provide
14 guidance for the review of the license renewal
15 application, and we intend to have an SRP which will
16 preclude reconsideration of the adequacy of the
17 current licensing basis during the license renewal
18 reviews.

19 (Slide) Slide 13 --

20 CHAIRMAN CARR: Before we leave that one,
21 let's give the OGC a chance to explain why he thinks
22 it shouldn't apply there.

23 MR. PARLER: Well, the statement was that it
24 does not apply to the application for the renewal.
25 The backfit does apply to the existing license which

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1 would be renewed, and it does apply to the renewed
2 license after it is renewed, the backfit rule does.

3 The purpose of the backfit rule is to
4 provide for regulatory stability and a disciplined
5 approach in changing current requirements from a floor
6 which is deemed to provide adequate protection to the
7 public health and safety. If there is such a floor
8 which exists for a license that has been applied for
9 to be renewed, it isn't entirely clear to me what that
10 existing floor is. The floor is that we're going to
11 review the application, assuming that the current
12 licensing basis could be accepted. And the addition
13 to that would be the age degradation requirements, and
14 it would seem to us that that's not a situation that
15 requires a backfit type analysis. You're talking
16 really about new requirements not changing existing
17 requirements. That is explained --

18 CHAIRMAN CARR: I guess I fail to see the
19 disadvantage of having it apply.

20 MR. PARLER: Well, if one wants to go
21 through the backfit type analysis, you would quickly
22 reach the conclusion from looking at what is the key
23 first principle here, that is that the current
24 licensing basis, which we will explain someplace, is
25 adequate, and what is needed is these additional age

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1 degradation requirements. And presumably, we need
2 those in order to provide adequate protection.

3 CHAIRMAN CARR: Yes.

4 MR. PARLER: Under your theory, you apply
5 the backfit rule. The backfit rule says that you
6 don't have to have a backfit analysis in order to
7 demonstrate adequate protection. So that's the end of
8 it. If you want to take that unnecessary detour, I
9 assume that that is all right. But I guess our
10 suggestion, which is explained on page 7 of the paper
11 in enclosure 3, I believe, page 6, is that you don't
12 need to do that.

13 CHAIRMAN CARR: Okay.

14 COMMISSIONER REMICK: A related question
15 comes to mind. I realize that OGC has decided that
16 this should be a new license or a renewal, not an
17 extension or amendment, yet I believe in the case of
18 non-power reactors you have extended the expiration
19 date and therefore, I guess, is an amendment. Now is
20 that because the non-power reactors are licensed under
21 Part 104 -- Section 104 of the Atomic Energy Act?
22 What's the difference? My understanding is non-power
23 have been done as an amendment.

24 MR. PARLER: The non-power reactors, the
25 statutory language between 104 and 103 differs, so we

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1 do have a legal analysis of that question prepared
2 which I would be glad to share with you and with your
3 staff.

4 COMMISSIONER REMICK: But no simple answer
5 to whether non-power reactors -- the expiration date
6 was extended because they're under Section 104? Is
7 that the reason? Or is that in your analysis? It's a
8 question of curiosity on my part.

9 MR. PARLER: It's the renewal language in
10 the Statute that we're operating under here. That's
11 what is the subject of our analysis.

12 COMMISSIONER REMICK: I must admit I don't
13 understand, but I'll read the analysis, then I'll have
14 an answer.

15 MR. PARLER: Well, it is rather difficult.
16 It seems, at least from my standpoint, if you are
17 implementing a statute that says that the Commission
18 may renew a license for a term, and the term may be an
19 additional term up to 20 years by policy choice or
20 legally up to 40, to simply say that's an amendment to
21 that license, you're really giving the thing new life
22 for an additional term.

23 COMMISSIONER REMICK: I don't differ with
24 that, but why wasn't the same determination for non-
25 power reactors -- if I'm right, the way it was handled

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1 there was an amendment by extending the expiration
2 date. It seems to me to be an inconsistency.

3 MR. PARLER: Because the statutory language
4 for the two different kind of reactors differ. That's
5 why.

6 COMMISSIONER REMICK: Okay. All right.

7 CHAIRMAN CARR: Let's proceed.

8 DOCTOR MINNERS: (Slide) Slide 13 tries to
9 explain how we intend to apply this theory. The way
10 we view it is that the renewed licensing basis will be
11 the sum of the current licensing basis or the part of
12 it that's not age-related, plus the age-related
13 licensing basis. And our intent is that the current
14 licensing basis, the part that's not age-related, will
15 not be reopened as part of the review of the renewal
16 application. And any changes to the current licensing
17 basis would be done as part of the current license,
18 and they would be done under the backfit rule.

19 However, the age-related portion of the
20 renewed licensing basis, that is what we're going to
21 review during the application. And that -- obviously,
22 we're going to have additional things, and that's what
23 these industry technical reports are supposed to
24 provide and the screening method is supposed to
25 identify. But any of these additions will not be done

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1 through the backfit rule, because it does not apply.

2 Therefore, once the renewed licensing basis
3 is established with these additional requirements for
4 age degradation, that can again only be changed under
5 the backfit ruling.

6 COMMISSIONER CURTISS: Warren, your second
7 bullet there indicates that the objective of the age-
8 related licensing basis is to maintain a current level
9 of safety throughout the renewal term.

10 DOCTOR MINNERS: Yes, sir.

11 COMMISSIONER CURTISS: Take an issue like
12 fatigue, where you may -- let's say at the point of
13 renewal you're at ten percent of the regulatory limit.
14 Clearly, on an issue like fatigue, your level of
15 safety at the time of renewal is ten percent of a
16 regulatory limit, but because of continued fatigue you
17 may in fact see a decline in safety, albeit within the
18 regulatory limit. You'd be within the regulatory
19 limit over a period of 20 years.

20 Do you really mean "to maintain a current
21 level of safety," or are you talking about maintaining
22 the current licensing basis?

23 DOCTOR MINNERS: It's really the current
24 licensing basis and an acceptable level of safety.

25 COMMISSIONER CURTISS: Okay.

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1 CHAIRMAN CARR: But you would put a license
2 condition in there if you saw in that 20 years they
3 were going to have to do something with some
4 component, wouldn't you?

5 MR. TAYLOR: Yes.

6 DOCTOR MINNERS: We could take some actions
7 to bring the level back up, yes.

8 MR. TAYLOR: You might have less if an
9 extension was for 20 years, but that component might
10 be good for ten.

11 COMMISSIONER CURTISS: My question really
12 went to the current level of safety. You're going to
13 have a current level of safety at the time that you
14 issue the application that in many respects may be --

15 DOCTOR MINNERS: Acceptable level of safety
16 is the proper --

17 MR. TAYLOR: Yes. You're point is well taken.

18 CHAIRMAN CARR: Once you've said that, then
19 I don't see -- if you apply the backfit rule through
20 that period, you can require them to do anything if
21 you maintain it's an adequate level of safety item.
22 And the backfit rule you wouldn't have to go into.

23 DOCTOR MINNERS: It's not an adequate level
24 of safety, it's an acceptable level, which may be
25 higher than adequate.

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1 The current licensing basis is generally
2 above a level of adequate safety, and that's what we
3 are trying to maintain is the current licensing basis.

4 CHAIRMAN CARR: I've got some problems, I
5 guess, with that statement that you just made.
6 Amplify that a little, what we're regulating to
7 require.

8 DOCTOR MINNERS: (Slide) Well, I have a
9 back-up slide number 1. Pardon me, back-up slide
10 number 3.

11 This is, hopefully, illustrative of what
12 we're talking about. The upper jagged line is the
13 level of safety that the plant has. The next
14 horizontal line is the current licensing basis, which
15 sometimes we modify either up or down. And below that
16 is the level of safety that is adequate. The line is
17 jagged, because as you do surveillances, maintenance,
18 repair, replacements, the level of safety goes up or
19 down. And even sometimes it could go above the
20 current licensing basis, and then we'd have to take
21 some action. We may shut them down. We may not shut
22 them down. That's at our discretion.

23 Presumably you see out there where the upper
24 jagged line splits. What we are trying to do is keep
25 it more or less where it was before. And presumably,

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1 if we didn't have these additional measures to control
2 degradation, it would slowly trend downward and go
3 below the current licensing basis and eventually even
4 go below the level of adequate.

5 So the ~~point~~ intent of this chart or graph is to
6 try to show how we're trying to keep that current
7 licensing basis or that current level of safety which
8 varies up and down about where it is and above the
9 current licensing basis.

10 So we always have a margin. Utility will
11 always keep a margin between its level of safety and
12 the licensing basis, so they don't risk limits on your
13 operation.

14 CHAIRMAN CARR: Okay.

15 DOCTOR MINNERS: And the way we have
16 regulated in the past is that the current licensing
17 basis we have enhancements to safety which are above
18 what is necessary to maintain adequate protection. So
19 there is some -- in I would say all licensing bases,
20 some margin between current licensing basis and
21 adequate safety.

22 COMMISSIONER REMICK: Is this a new thought?

23 CHAIRMAN CARR: How did we get from adequate
24 to current licensing basis?

25 DOCTOR MINNERS: Because we put some things

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1 on which are not necessary for adequate protection,
2 but are enhancements which are cost-beneficial.

3 COMMISSIONER CURTISS: Those are backfits,
4 in effect. Is that right?

5 DOCTOR MINNERS: Or they could be frontfits.

6 COMMISSIONER CURTISS: Okay. But backfits
7 would be included within that?

8 DOCTOR MINNERS: In backfits, we have to
9 prove it. In frontfits, we don't have to prove --

10 COMMISSIONER CURTISS: Okay. Fair enough.

11 COMMISSIONER REMICK: They're conservatisms.
12 Is that --

13 DOCTOR MINNERS: No. They're cost-
14 beneficial. We looked at it and said, "I can increase
15 safety --

16 COMMISSIONER REMICK: Some of these would
17 not be backfits. They're impositions at the original
18 license.

19 DOCTOR MINNERS: They may be.

20 COMMISSIONER REMICK: I assume it's because
21 of conservatism in our licensing basis.

22 DOCTOR MINNERS: We didn't have as quite a
23 formal procedure in most of these original licenses,
24 but I think the same thought process there. I don't
25 believe that everything that was imposed on the

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1 original licenses was put on there because it was
2 necessary for adequate safety. I think there was some
3 cost benefit, albeit maybe qualitative thoughts behind
4 those things.

5 MR. TAYLOR: And conservatisms.

6 DOCTOR MINNERS: And conservatisms, yes.

7 DOCTOR MURLEY: Before we leave slide 13, I
8 think I want to make sure that we all understand--
9 Commissioner Curtiss brought up the point. There is
10 an error on this slide. We're going to maintain an
11 acceptable level of safety, not the current level.

12 DOCTOR MINNERS: (Slide) Slide 14 was the
13 last of the eight subjects discussed, and from the
14 comments at the workshop the industry wanted some
15 special hearing procedures for a license renewal
16 hearing. They wanted some limits on the hearings, to
17 limit the number of interrogatories, to change the
18 standards for summary dispositions, to have strict
19 hearing schedules. And they wanted to have an ASLB
20 decision within 300 days of the SER as kind of a fixed
21 thing you had to do.

22 I understand our position is that the
23 current Part 2, which was recently changed, is
24 adequate and will provide for timely, efficient
25 hearings.

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1 In addition, I think we'd note that because
2 of the timely renewal provisions this precludes any
3 concerns regarding interruption of the operation of a
4 plant due to protracted hearings. So we think that
5 the current Part 2 procedural rule is perfectly
6 adequate for a renewal license application.

7 CHAIRMAN CARR: Are we looking at those for
8 possible generic application sometime? I mean, are
9 there some good ideas in there we ought to be
10 considering?

11 MR. PARLER: These good ideas were looked at
12 by a regulatory reform task force a number of years
13 ago. They may be good ideas, but I'll leave that to
14 others to judge. I'm not implying that they are bad
15 ideas, but the ideas good and bad were put on the
16 Commission's table by this regulatory reform task
17 force. And the final changes were put out within the
18 past year, and they are being challenged now in the
19 courts. I would suggest that you might want to wait
20 and see how that challenge comes out before we move
21 boldly in a different direction.

22 I might add, also, in addition to the timely
23 renewal feature of the law, which as Doctor Minners
24 has pointed out is very important here, because you
25 don't have the leverage of holding up things by

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1 litigation, but beyond that I gather from this staff
2 paper and from the discussion here that major efforts
3 will be undertaken. And if they are successful, a lot
4 of issues could not be litigated in the current
5 licensing basis, and I emphasize "if" the approach is
6 successful.

7 The age degradation requirements. If a rule
8 is put into place, we could put in our notice of
9 hearings for these proceedings what the framework, the
10 contested issues should be, or the boundaries.

11 So I would think that the experience of the
12 past -- that is, the experience that we've had in
13 initially licensing these plants -- by no means
14 picture what a renewal hearing and renewal litigation
15 would be like. Even if it is nothing else, it would
16 be much more narrow, much more focused, and much more
17 efficient.

18 But we are always looking for ways, either
19 from court decisions or from administrative conference
20 recommendations, to streamline our procedural process.

21 CHAIRMAN CARR: Well, I must admit I'm
22 somewhat sympathetic to the schedule. Give them
23 enough time and hold them to it. It seems like a
24 reasonable approach.

25 MR. PARLER: That is one of the regulatory

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1 reform suggestions that was definitely made and was
2 put before the Commission, I believe, in the early
3 '80s. And I believe, if my recollection is correct,
4 that the leadership of the Licensing Boards at the
5 time suggested that a firm schedule was not a good
6 idea. Give them a target goal and that would be all
7 right. We do have built into our procedures now
8 target goals.

9 COMMISSIONER CURTISS: It might make sense
10 to do something along the lines of what we did on the
11 high level waste proceeding, where it wasn't a firm
12 target but in Subpart J where the model schedule was
13 laid out and what dates roughed out in the schedule
14 itself. I don't know where I come down on that issue
15 in this context, but it might be something that the
16 staff takes a look at as it prepares the proposed rule
17 for our consideration. It would provide some
18 additional guidance in terms of the general framework
19 and schedule framework that we would expect ought to
20 be met absent other considerations in a proceeding of
21 this nature.

22 MR. PARLER: The bottom line point about
23 schedules is that a schedule is really meaningless
24 until you know what the complexity of the hearing is
25 going to be. As Malsch has told me, if you have one

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1 minor issue the schedule can be tight. On the other
2 hand, if you have 100 highly contested issues in a
3 complicated case, a model schedule doesn't mean a lot.

4 CHAIRMAN CARR: Well, since these are
5 special cases we haven't faced before, we might need
6 it.

7 MR. PARLER: Right. That could be done.

8 CHAIRMAN CARR: Something we could do to
9 help.

10 All right. Let's proceed.

11 DOCTOR MINNERS: (Slide) Slide 15 is a
12 summary of the staff actions as a result of the
13 workshop.

14 We have modified the conceptual rule, and
15 that's provided in enclosure 4 to the paper.

16 We now are going to have a schedule which
17 decouples the Part 54 rulemaking from the Part 51
18 rulemaking.

19 We will produce one reg guide on format and
20 content.

21 And the other licensing guidance will be
22 through SERs on the NUMARC reports, which is the
23 screening report we've discussed, and the ten
24 technical reports.

25 (Slide) On slide 16, which is shown in more

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1 detail on Enclosure 5 to the paper, as we said, we're
2 going to separate Part 51, environmental rulemaking,
3 from the Part 54, license renewal, in order to
4 accelerate the Part 54 rule.

5 The reg guide on format and content, the
6 NUMARC reports on screening, and the SRP that pulls
7 that all together would be on a slower track than the
8 54 rule. And the industry technical reports would be
9 fit in there to be available and useful about the same
10 time as the Part 51 rulemaking. And we have to work
11 out those detailed schedules.

12 The resources to do all of this are budgeted
13 and we don't need to request any more resources.

14 CHAIRMAN CARR: When you're putting out the
15 reg guide, the final reg guide, that part after the
16 final rule, are they going to have enough information
17 in the final rule that they'll be able to submit their
18 application and have it --

19 DOCTOR MINNERS: I think on slides --

20 CHAIRMAN CARR: -- assurance that they're
21 going to be in compliance with the reg guide too?

22 DOCTOR MINNERS: Slide 17, I think, will
23 hopefully illustrate that. It shows a little more
24 details of the schedule. We would be getting the
25 proposed rule to the Commission in May of this year in

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1 order to meet our May of '91 date to get it before the
2 application which would be in June of '91.

3 Now the reg guides in the SRP are going to
4 follow that, but there will be a draft published in
5 December of '90, which will be six months before the
6 application is tendered, and so the applicant can have
7 a good idea of what the reg guide is going to be,
8 albeit in a draft form.

9 NRR is now doing predocketed reviews of the
10 leads plants at Yankee and Monticello. We'll
11 certainly learn something from that that can be fed
12 back into this guidance.

13 (Slide) On slide 18 is the schedule for
14 Part 51. The controlling action is that first bullet
15 where we have to put out a *Federal Register* notice
16 which is a notice of intent. That's a procedural
17 requirement in case we want to call it an impact
18 statement. That can't be done until June of this year
19 and then when you just put the review and comment
20 template on top of that, that kind of forces us to
21 have a final rule not before April of '92, which will
22 be before any renewed license is issued.

23 So, that is our plan and our purpose. It's
24 a very tight schedule to do this. One of our purposes
25 in presenting this to the Commission today is to try

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1 to get some feedback now if the Commission desires any
2 changes so we can get a little jump on that. If we
3 get changes late in the process, we may not be able to
4 meet the schedule.

5 COMMISSIONER CURTISS: Just one quick
6 question on that last chart. On the Part 51
7 rulemaking, will the generic environmental document
8 and the S table that you intend to use should be on
9 the books before the actual hearing begins for the
10 pilot plants?

11 DOCTOR MINNERS: Yes. Yes.

12 COMMISSIONER CURTISS: Okay. How much
13 time -- I recall the dates for submission of the
14 applications. How much time are you projecting for
15 review of the SERs in the two pilot plant cases?

16 DOCTOR MINNERS: The review of the SERs?
17 You mean of the application --

18 COMMISSIONER CURTISS: Preparation of the
19 SERs.

20 DOCTOR MINNERS: Say again?

21 COMMISSIONER CURTISS: Preparation of the
22 SERs before you get into the area.

23 MR. TRAVERS: The SERs for the industry
24 technical reports are estimated to take approximately
25 a year for internal review, including coordination

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1 through the ACRS.

2 COMMISSIONER CURTISS: And will you prepare
3 an SER then on the application once it comes in?

4 DOCTOR MINNERS: Yes.

5 MR. TRAVERS: Yes.

6 DOCTOR MINNERS: We expect about a two year
7 review.

8 COMMISSIONER CURTISS: Two year? Okay.

9 DOCTOR MINNERS: I think that was the
10 number. But we haven't fixed on that. That's a
11 tentative.

12 COMMISSIONER CURTISS: Okay.

13 DOCTOR MINNERS: That's all I have to
14 present. Thank you.

15 CHAIRMAN CARR: All right. Any questions?
16 Commissioner Remick?

17 COMMISSIONER REMICK: Well, one. I
18 certainly favor the staff proposal that we've heard
19 today. On the matter of the screening criteria, I
20 would urge the staff to do as thorough a job as you
21 possibly can because I think it's important to the
22 process and hopefully prevent later challenges to
23 them. I would like to ask you to give consideration
24 to the pros and cons of requiring that list of
25 licensing basis documents either in the application or

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1 separately, to give consideration to the advantages
2 and disadvantages.

3 And the concern I have, since there are
4 various offices involved, including the Commission
5 office of OGC, that I do urge that you have some tight
6 management control backed by the EDO so that you're
7 able to maintain the schedules that you've proposed.

8 CHAIRMAN CARR: Commissioner Roberts?

9 COMMISSIONER ROBERTS: None.

10 CHAIRMAN CARR: Commissioner Rogers?

11 COMMISSIONER ROGERS: Where does the
12 research agenda stand with respect to any issues for
13 licensing renewal? Are there any outstanding research
14 issues that have to be cleaned up before we're ready
15 to move?

16 MR. BOSNAK: There are really no outstanding
17 what I'd call show stopping research efforts that we
18 think have to be completed. We're continuing with the
19 aging research program, both the ANPR Program and the
20 Materials Program.

21 COMMISSIONER ROGERS: Well, there were some
22 questions about the availability of surveillance
23 samples in some plants. Is that going to be a
24 difficult issue to deal with, lack of those?

25 MR. BOSNAK: It's an issue that would have

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1 to be dealt with with respect to the end of life or
2 life assessment for the vessel. I think it will be a
3 case by case sort of thing as we approach each
4 licensee.

5 COMMISSIONER ROGERS: I mean we'll just have
6 to face that one when it comes up, is that it?

7 MR. BOSNAK: Yes, sir. It will be one of
8 the things that will have to be covered in the
9 application obviously.

10 COMMISSIONER ROGERS: We'll put more of the
11 responsibility for that on the licensee to come up
12 with an adequate demonstration of some sort. Is that
13 what you're saying?

14 Where do the ASME and ANSI codes -- how are
15 they going to be used in this process with respect to
16 degradation phenomena such as erosion/corrosion?

17 MR. BOSNAK: You asked about
18 erosion/corrosion. They have produced a subsection of
19 Section 11 now, Subsection IWT. That will eventually
20 be picked up in our regulations as a normal course,
21 irrespective of license renewal. So, that would be
22 handled that way.

23 They have a group on aging and life
24 extension looking at things that need to be included,
25 things that need to be changed within the IEEE and

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1 ASME codes and standards with respect to continuing
2 life. They are not really focusing on calling it
3 license renewal. They're focusing on the aging
4 aspects of extended life, how do you assess the
5 remaining life of a given component knowing where you
6 started, the various transients that it has
7 experienced during its service life, that sort of
8 thing.

9 COMMISSIONER ROGERS: But that has not been
10 completed yet?

11 MR. BOSNAK: That part of it has not been
12 completed. The part on erosion/corrosion has been
13 completed. We will eventually pick that up as a
14 normal process when we modify 50.55(a).

15 COMMISSIONER ROGERS: Is it conceivable that
16 there could be a problem with that with respect to any
17 particular license renewal application?

18 MR. BOSNAK: I don't believe so. The code
19 itself only covers class 1, 2 and 3 components. It
20 does not cover balance of plant. So, we would have to
21 be able to look at the application to balance of plant
22 components, which are important as we use it in the
23 conceptual rule, which are important to license
24 renewal. So, that's really basically part of the
25 screening process.

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1 COMMISSIONER ROGERS: Just in this general
2 area of degradation, I haven't seen too much on
3 electrical systems. It seems to me that the focus has
4 tended to be on cables, environmental and aging
5 effects on cables. But what about other electrical
6 components? Some of these plants are pretty old and
7 their control systems are old fashioned and I suspect
8 there are some paper-wound capacitors in some of those
9 systems. What is our thinking about that? I haven't
10 seen anything on it and in this --

11 MR. BOSNAK: Well, you're correct, sir. The
12 cable area is one for which there will be a NUMARC
13 technical report because that was looked at as being a
14 difficult area, an expensive area if you had to
15 replace those things. The smaller items that have
16 shorter finite lifetimes are supposedly covered within
17 existing programs.

18 So, to answer your question, if you --

19 COMMISSIONER ROGERS: It's part of a
20 maintenance program essentially.

21 MR. BOSNAK: It's part of the maintenance
22 program. In the conceptual rule, we call it an
23 effective established program. But the criteria for
24 those programs, when you decide that something has to
25 be replaced, that is something that the staff is still

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1 reviewing.

2 COMMISSIONER ROGERS: Okay. Just on a
3 little different topic, the tech specs. Do you
4 contemplate any changes in tech specs that will become
5 part of the license renewal conditions? The
6 conceptual rule provided a draft section on that,
7 54.15. Do you think that there will be a possibility
8 of tech spec changes as part of the license renewal
9 approval?

10 DOCTOR MINNERS: It's possible. I don't
11 think anybody that I know of has identified any tech
12 spec change at this time. But conceptually, yes. As
13 a means of compensating for degradation, yes, you
14 might change surveillance intervals or LCOs or
15 something.

16 COMMISSIONER ROGERS: So, it's possible.
17 I think that's all that I have.

18 CHAIRMAN CARR: Commissioner Curtiss?

19 COMMISSIONER CURTISS: I just want to add my
20 voice to Commissioner Remick's and commend the staff.
21 It seems to me you've done an excellent job of pulling
22 together the results of the workshop and in fairly
23 short order presented an excellent overview of the
24 issues and the direction that we're taking. It seems
25 to me like the biggest part of your job lies ahead of

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1 you in terms of scheduling resources and it's an
2 aggressive schedule and I encourage you to do what you
3 can to meet that given the importance of the issue.

4 I would, between now and when the proposed
5 rule comes back before the Commission, encourage you
6 to take a look at two issues that I'm interested in.
7 First, if you could, take a look at the possibility of
8 including as much of the screening criteria in the
9 regulatory framework itself as opposed to the reg
10 guide. It does seem to me that some -- although there
11 are technical tradeoffs in doing that, there are some
12 potential benefits from the standpoint of how much
13 time we spend litigating the screening process versus
14 the subsequent issues with less likelihood of that
15 happening the more it's included in the rule.

16 Then, in addition, on the question of the
17 current licensing basis, what's required in terms of
18 the documentation. I guess I -- the discussion here
19 was helpful, but I'd like to see a more thorough
20 discussion of just what the nexus is between requiring
21 the documentation in terms of the decisions and
22 actions that the staff thinks need to be taken in the
23 context of plant life extension. It wasn't quite
24 clear to me from this discussion what that nexus is,
25 but if you can beef that up, that would be helpful for

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1 me.

2 That's all I have.

3 CHAIRMAN CARR: All right. I would say in
4 the two pilot cases you're going to look at early on,
5 you might get a lot of lessons learned out of your
6 current licensing basis match and you may want to be a
7 little more thorough as a kind of a quality control
8 check on whether that system works or not or what you
9 want to do with it.

10 The other thing I'm concerned about is
11 the -- the way I read it, if a guy comes in at the
12 five year period for an extension and you won't extend
13 it beyond 45 years, it says not more than 40 years
14 total in the extension and now more than -- of his
15 total life, and not more than 20 years. The words are
16 kind of interesting and I gather you were trying to
17 put a bound on it.

18 It says, "Renewal term means the period of
19 time which is the sum of the remaining number of years
20 on the operating license currently in effect, plus the
21 additional amount of time beyond the expiration of the
22 operating license not to exceed 20 years, which is
23 requested in the renewal application. The total number
24 of years for any renewal term shall not exceed 40
25 years."

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1 So, if he came in any time before the 20
2 year period, he's only going to get less -- 20 plus
3 whatever's between him and 20, huh?

4 DOCTOR MURLEY: That's correct. By the
5 Atomic Energy Act, we can only issue a license for a
6 period of 40 years. So, if he comes in before 20
7 years has expired and we act before 20, then we can
8 only give a 40 year license.

9 CHAIRMAN CARR: Total? Beyond that point?

10 DOCTOR MURLEY: Yes.

11 CHAIRMAN CARR: Whatever point he comes in.
12 That's why -- obviously 20 years is not a number we
13 know a lot about. Why did you pick 20 and is there
14 some -- I'm concerned always about picking an
15 arbitrary number. At this point it seems like a great
16 number, but when that guy's license begins to expire
17 and he's going to want to change it again, is 25 all
18 right?

19 MR. BECKJORD: Mr. Chairman, I think to
20 begin with, the 40 year life was arbitrary at the time
21 it was selected.

22 CHAIRMAN CARR: Oh, but they did design
23 components toward that life, didn't they?

24 MR. BECKJORD: I think that --

25 CHAIRMAN CARR: I mean they knew at the time

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1 they were going to --

2 MR. BECKJORD: I think the development of
3 codes was going on in parallel with that. So,
4 recalling some of the work that was done at that time,
5 I think it would be difficult to say that the
6 requirements were all preordained. It seems to me
7 that with respect to the 20 year, I think that people
8 have the feeling, looking at experience, that it's a
9 reasonable expectation and I think that's where the
10 number comes from.

11 CHAIRMAN CARR: That's just today's firm
12 look.

13 DOCTOR MURLEY: Yes.

14 CHAIRMAN CARR: Twenty years from now,
15 they're going to look at it differently.

16 DOCTOR MURLEY: They may.

17 CHAIRMAN CARR: All I'm worried about is are
18 we putting a number in there that we don't really need
19 to tie ourselves to arbitrarily. You might give that
20 some thought when you take --

21 DOCTOR MURLEY: Personally, I think that the
22 designers need a fairly firm guideline so they don't
23 have an open-ended target, for example, to design
24 mitigation systems for, design their vessel
25 embrittlement systems for and that sort of thing.

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1 CHAIRMAN CARR: Well, I guess what I'm
2 saying is, if the guy can come in with good
3 documentation to go for 23 years, we ought to look at
4 it rather than just arbitrarily say, "Twenty years is
5 all --." I mean if you're going to say 20, why not
6 say ten?

7 DOCTOR MURLEY: Well, it makes it very
8 difficult for the staff because we have to have our
9 own basis for reviewing his application against. He
10 may very well make a good case for 23 years. His
11 neighbor may make a good case for 26 years. I think
12 I'm arguing in kind of -- as a plea almost for the
13 staff to have some kind of framework so that we can
14 guide our research program and have a 60 year life. I
15 admit it's arbitrary, but it --

16 MR. TAYLOR: This came up early on in the
17 discussion and that's how it got selected really. It
18 came up early as a basis, right?

19 DOCTOR MURLEY: Yes.

20 MR. TAYLOR: As I recall, from when we first
21 talked about it. It's been the basis of discussion
22 with the industry. I understand your point. We'll
23 take a look at it, but that number came up in the
24 earliest of discussions of this whole subject, as I
25 recall.

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1 Isn't that true, Tom?

2 DOCTOR MURLEY: That's correct, yes.

3 MR. TAYLOR: And it seemed like a good, fair
4 target.

5 CHAIRMAN CARR: Twenty years away?

6 MR. TAYLOR: Some of us won't be here.

7 COMMISSIONER REMICK: Is there anything to
8 prevent a renewal of a renewal?

9 DOCTOR MURLEY: No.

10 MR. TAYLOR: No.

11 CHAIRMAN CARR: Eric?

12 MR. BECKJORD: Just a point on Commissioner
13 Rogers' question on tech specs. The only case that I
14 can think of where there would be a change would be
15 relating to the aging degradation, if there were some
16 requirement that it would be revisable to include for
17 reasons of aging. But other than that, I wouldn't--
18 I don't know of any changes that would be made.

19 CHAIRMAN CARR: Well, I'd like to also thank
20 the staff for the briefing. It appears that the
21 license renewal rule workshop was successful and that
22 you got good comments from that activity and it was
23 obviously a very important activity as a rule.

24 I'm supportive of the staff's plan in the
25 schedule which would result in publication of the

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1 final license renewal rule in May of '91. I'm
2 somewhat concerned, as you noted, that the final rule
3 won't provide everything the licensees might need to
4 proceed with a license renewal application. The
5 regulatory guide on the format and content of the
6 application and the staff's safety evaluation reports
7 on the industry technical reports will provide
8 important regulatory guidance.

9 I request you look closely at the schedule
10 for completion of these documents to see what can be
11 so they'll be useful to the early license renewal
12 applicants.

13 I also believe it would be worthwhile to
14 incorporate the schedule for the industry technical
15 reports and the staff's safety evaluations in the
16 overall program plan and schedule for completion of
17 the renewal activities.

18 It appears that Offices of Research, NRR and
19 OGC are working closely together to come to a well
20 thought out, as well as a timely, licensing renewal
21 rule and I commend you for this. I urge you to
22 integrate the results of the aging research into this
23 process on a continuing basis as more information
24 becomes available.

25 I also request you interact as early as

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1 possible with the Advisory Committee on Reactor
2 Safeguards to obtain their views.

3 Are there any additional comments?

4 If not, we stand adjourned.

5 (Whereupon, at 3:37 p.m., the above-entitled
6 matter was concluded.)

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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 STATUS OF PROPOSED RULE ON LICENSE RENEWAL

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: JANUARY 30, 1990

were transcribed by me. I further certify that said transcription
is accurate and complete, to the best of my ability, and that the
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**RESULTS OF PUBLIC WORKSHOP
ON LICENSE RENEWAL**

PRESENTED BY

**OFFICE OF NUCLEAR REGULATORY RESEARCH
AND
OFFICE OF NUCLEAR REACTOR REGULATION**

**COMMISSION BRIEFING
JANUARY 30, 1990**

OBJECTIVE

**TO REPORT ON THE RESULTS OF
THE NOVEMBER WORKSHOP ON
LICENSE RENEWAL AND THE
RESULTING STAFF PLANS AND
ACTIONS**

TOPICS COVERED

- o WORKSHOP**
- o MAJOR ISSUES**
- o RESULTING STAFF ACTIONS**
- o PROGRAM PLAN AND SCHEDULE**

WORKSHOP

- o FEDERAL REGISTER NOTICE**
- o WORKSHOP SESSIONS**
- o ATTENDANCE**
- o WRITTEN COMMENTS**

MAJOR ISSUES

- o GENERIC ENVIRONMENTAL DOCUMENT**
- o REGULATORY GUIDES**
- o PROBABILISTIC RISK ASSESSMENT**
- o CURRENT LICENSING BASIS**
- o SEVERE ACCIDENTS**
- o SCREENING PROCESS**
- o BACKFIT**
- o HEARINGS**

**GENERIC ENVIRONMENTAL
DOCUMENT (GED)**

- o ALTERNATIVE APPROACH**
 - PART 54 RULEMAKING (RULE)**
 - SUPPORTED BY EA**
 - FINAL RULE MAY 1991**
 - PART 51 RULEMAKING (GED)**
 - SUPPORTED BY GED**
 - FINAL RULE APRIL 1992**
- o INDUSTRY POSITION**

REGULATORY GUIDES

- o REGULATORY GUIDE ON
FORMAT AND CONTENT**
- o SER ON NUMARC SCREENING
METHOD REPORT**
- o SERs ON 10 OTHER INDUSTRY
REPORTS**

PROBABILISTIC RISK ASSESSMENT

- o NO PRA REQUIREMENT**
- o METHODOLOGY ACCOMMODATING
AGING STILL EVOLVING**

CURRENT LICENSING BASIS

- o KEY REGULATORY PRINCIPLE**
- o CONTINUING ADEQUACY
ADDRESS IN FRN**
- o REQUIRED IN CONCEPTUAL RULE**

SEVERE ACCIDENTS

- o NO REQUIREMENT IN CONCEPTUAL
RULE**
- o IMPORTANCE OF CLOSURE EMPHASIZED
IN STATEMENT OF CONSIDERATIONS**

SCREENING PROCESS

- o CREDIT FOR EXISTING PROGRAMS**
- o CONCEPTUAL RULE MODIFIED**
- o DETAILS IN INDUSTRY SCREENING REPORT**

BACKFIT

- o INDUSTRY WANTS BACKFIT REQUIREMENTS ON LICENSE RENEWAL APPLICATION**
- o STAFF BELIEVES BACKFIT RULE NOT APPLICABLE TO APPLICATION**
- o BACKFIT WOULD APPLY AFTER RENEWAL**
- o RECOGNIZE NEED FOR STAFF REVIEW GUIDANCE**

ELEMENT OF RENEWED LICENSING BASIS

RENEWED LICENSING BASIS = CLB + AGE-RELATED LB

- o CLB (CURRENT LICENSING BASIS) WILL NOT BE REOPENED AS PART OF REVIEW OF RENEWAL APPLICATION (BACKFIT RULE APPLIES)**
- o AGE-RELATED LB (LICENSING BASIS) WILL BE ESTABLISHED VIA REVIEW OF RENEWAL APPLICATION TO MAINTAIN CURRENT LEVEL OF SAFETY THROUGHOUT RENEWAL TERM (BACKFIT RULE DOES NOT APPLY)**
- o RENEWED LICENSING BASIS, ONCE ESTABLISHED, WILL ONLY BE CHANGED UNDER BACKFIT RULE**

HEARINGS

- o INDUSTRY WANTS SPECIAL
HEARING PROCEDURES**
- o CURRENT PART 2 ADEQUATE**

SUMMARY OF STAFF ACTIONS

- o MODIFIED CONCEPTUAL RULE**
- o MODIFIED PLAN AND SCHEDULE**
 - FINAL RULE (PART 54)
SUPPORTED BY EA MAY 1991**
 - FINAL CHANGE TO PART 51
SUPPORTED BY GED APRIL 1992**
- o ONE R.G. (FORMAT AND CONTENT)**
- o LICENSING GUIDANCE ON SCREENING,
SER ON NUMARC REPORT**
- o ADDITIONAL LICENSING GUIDANCE
SERs ON INDUSTRY TECH. RPTS.**

LICENSE RENEWAL PROGRAM PLAN

- o SEPARATE PART 51 RULEMAKING
FROM PART 54 RULEMAKING**
- o ACCELERATE PART 54 RULE**
- o RG & NUMARC RPTs ON SLOWER
TRACK**
- o INDUSTRY TECHNICAL REPORTS**
- o RESOURCES**

SCHEDULE - PART 54

o RULE

- | | |
|-------------------------------|----------|
| - PROPOSED RULE TO COMMISSION | 05/14/90 |
| - PROPOSED RULE PUBLISHED | 06/29/90 |
| - FINAL RULE TO COMMISSION | 04/15/91 |
| - FINAL RULE PUBLISHED | 05/31/91 |

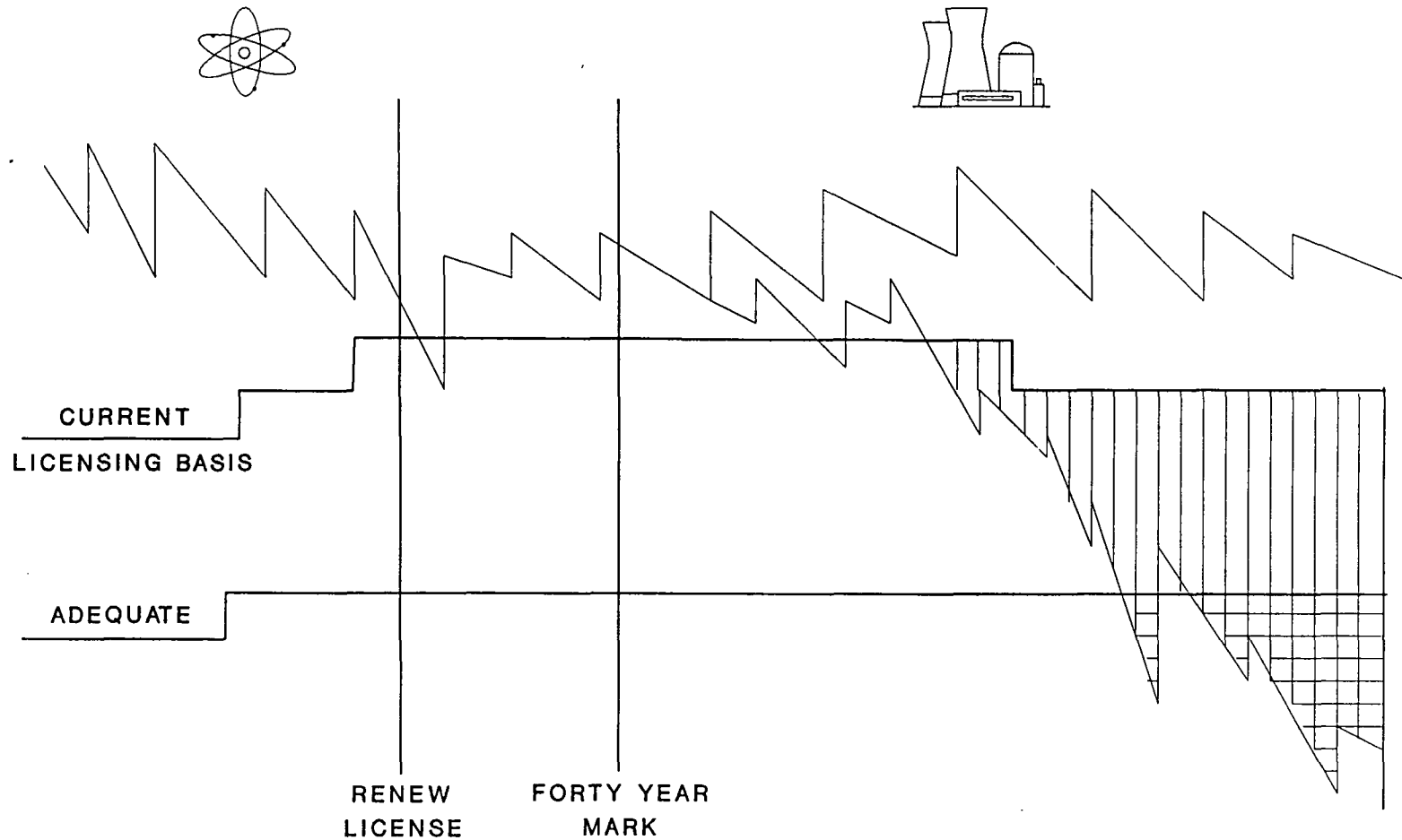
o R.G. AND SRP

- | | |
|-----------------------|----------|
| - DRAFT TO COMMISSION | 11/02/90 |
| - DRAFT PUBLISHED | 12/14/90 |
| - FINAL TO COMMISSION | 02/92 |
| - FINAL PUBLISHED | 04/92 |

SCHEDULE - PART 51

- o ANPR/FRN PUBLISHED 06/29/90**
- o PUBLIC WORKSHOP 07/25/90**
- o PROPOSED RULE AND GED
TO COMMISSION 05/24/91**
- o FINAL RULE, GED TO
COMMISSION 02/28/92**
- o FINAL RULE, GED PUBLISHED 04/18/92**

LEVEL OF SAFETY





POLICY ISSUE

(Notation Vote)

January 17, 1990

SECY-90-021

For:

The Commissioners

From:

James M. Taylor
Executive Director
for Operations

Subject:

REPORT ON LICENSE RENEWAL WORKSHOP AND PROPOSED
REVISIONS TO THE PROGRAM PLAN AND SCHEDULE FOR RULEMAKING

Purpose:

To report to the Commission on the results of the public workshop on technical and policy considerations for nuclear power plant license renewal, on specific topics identified in a Staff Requirements Memorandum dated October 11, 1989, and to request approval of resulting proposed changes to the staff's program plan and schedule.

Background:

In SECY-89-275, dated September 1, 1989, prepared in response to a Staff Requirements Memorandum, dated July 7, 1989, the staff presented for Commission approval a program plan and schedule to develop regulations and implement licensing guidance for the renewal of power plant operating licenses. The staff also reported to the Commission on how it planned to implement policy initiatives that changed the scope and schedule as well as the staff resource requirements for the completion of the rulemaking and guidance development. Three specific policy issues were discussed: license renewal basis and scope, treatment of severe accident issues, and options for addressing environmental issues. Also discussed were staff plans to hold a public workshop in November 1989 to solicit comments on its regulatory approach to development of a rule and licensing guidance. Subsequently, in

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Geary Mizuno, OGC
492-1639

SECY-89-288 dated September 13, 1989, the staff provided a discussion of the regulatory philosophy for license renewal, and a draft of regulatory language embodying this philosophy.

In a Staff Requirements Memorandum dated October 11, 1989, the Commission provided guidance on several matters. The public workshop was approved for November 1989 and the staff was requested to "clearly identify topics to be discussed and the staff's preliminary position on the issue" in the Federal Register notice. Also, comment was to be sought on the schedule for the proposed rule and options and schedule for the generic environmental impact statement. In addition, the Commission indicated that following the November public workshop, the staff should provide a paper to the Commission in which it evaluates the comments received, proposes revisions to the program plan and schedule for the rule and necessary environmental documents, identifies the key regulatory guides that must be completed at the time the final rule would be published, and discusses the value of a Level-3 PRA as part of license renewal.

The substance of SECY-89-288 was incorporated in the Federal Register Notice (54 FR, 41980, dated October 13, 1989) announcing the public workshop on technical and policy considerations for nuclear power plant license renewal held on November 13-14, 1989. This notice is included as Enclosure 1. Subsequently, a detailed set of questions was developed by the staff to guide discussion in each workshop session and was provided to each workshop participant. These questions are provided in Enclosure 2.

Summary:

The workshop was held on November 13-14, 1989. The staff has reviewed the comments received during and subsequent to the workshop. Highlights of the workshop and subsequent submittals are provided in Enclosure 3. The staff intends to respond to comments received and include the responses in the proposed rulemaking package scheduled for submission to the Commission in May 1990. Staff review of comments received has resulted in modification of the conceptual rule (Enclosure 4) and in several proposed changes to the program plan and schedule for license renewal (Enclosure 5).

The staff proposes to publish the final 10 CFR Part 54, supported by an environmental assessment (EA), by May 1991. A final generic environmental document and associated changes to Part 51 would be published in April 1992. Licensing guidance will be provided in (1) a regulatory guide on format and content of renewal applications, (2) a safety evaluation report on a screening methodology report prepared by industry and currently under staff review, and, (3) over the next two

years, in safety evaluation reports (SERs) on 10 additional industry technical reports (ITRs) focusing on various structures and components. Work on the regulatory guide and SERs will not be accelerated, but rather will proceed in parallel with the proposed Part 54 rule on the schedule provided to the Commission in SECY-89-275. The conceptual rule is silent on the use of probabilistic risk assessment for license renewal.

Discussion:

Workshop

Comments received during and subsequent to the workshop indicate general agreement with the staff's regulatory philosophy and approach to license renewal. The majority of comments were provided by industry organizations. The most extensive comments were provided by the Nuclear Management and Resources Council (NUMARC), Yankee Atomic Electric Company, and Northern States Power Company. Two hundred and one individuals (not including NRC staff) representing 97 organizations registered at the workshop. Twelve organizations submitted written comments. Major issues highlighted in the workshop are summarized below and are treated more extensively in Enclosure 3. A complete transcript of the workshop was made.

Resulting Staff Actions

As a result of the information gained at the workshop and in written comments, the staff has undertaken the following:

- Modified the conceptual rule (Enclosure 4) as part of the ongoing iterative process of developing a proposed rule.
- Modified the plan and schedule to provide for publishing the final license renewal rule, supported by an environmental assessment (EA), in May 1991 (prior to submittal of the first application for license renewal) and final changes to Part 51, supported by a final generic environmental document, in April 1992 (Enclosure 5).
- Decided to develop one regulatory guide on format and content of license renewal applications which addresses technical information.
- Determined that licensing guidance on screening methods can likely be accomplished by a safety evaluation report (SER) on the NUMARC document "Methodology to Identify and Evaluate Plant Equipment for License Renewal."

- Determined that additional licensing guidance can likely be provided over the next two years by SERs on the ten additional ITRs expected to be submitted.

Major Issues Discussed

Although there was general agreement with the staff's regulatory philosophy and approach to license renewal, various concerns were expressed. The following summarizes major issues discussed at the workshop and in subsequent submittals and the staff's position on them.

Generic Environmental Document (GED) - As proposed in SECY-89-275, the staff proposed to publish a license renewal rule, supported by a generic environmental impact statement, by April 1992. Workshop comments indicated support for a Part 51 rulemaking, supported by a generic environmental assessment (GEA), rather than a generic environmental impact statement (GEIS), to limit the environmental effects which need to be considered in individual plant specific license renewals. The staff now proposes to prepare an environmental assessment (EA) to support the proposed technical requirements for license renewal, i.e. proposed Part 54. This approach is based upon the assumption which remains to be confirmed that a technical basis can be developed for a finding that renewal of licenses for approximately 110 nuclear power plants under the proposed rule will not constitute a significant environmental impact.

The staff is also proposing to proceed with a separate Part 51 rulemaking to generically limit the environmental effects which need to be considered in plant-specific license renewals. At this time, the staff is proceeding to develop a generic impact statement, although an EA may be found to be appropriate on the completion of an evaluation currently under way. In the interim the staff prefers to use the term generic environmental document (GED). The staff proposes to publish a final Part 51 rule supported by a GED by April 1992.

NUMARC has offered assistance in the identification and development of industry information for use in the GED. The staff is identifying information needs for which NUMARC can provide assistance.

Regulatory Guides - There was agreement that licensing guidance is needed on the format and content of license renewal applications and on screening methodology to evaluate plant equipment for license renewal. The staff is working on a regulatory guide on format and content and the technical information required therein. An industry

report, Methodology to Evaluate Plant Equipment for License Renewal, is under staff review. The staff intends to issue an SER documenting the staff's evaluation if the report is found to be satisfactory. The staff anticipates other necessary guidance will be provided over the next two years by SERs on the 10 remaining ITRs scheduled to be submitted by February 1991. If any ITR is not acceptable to the staff, or not submitted in a timely manner, consideration will be given to developing a regulatory guide on the subject matter of the ITR.

Probabilistic Risk Assessment(PRA) - There is a general consensus that although PRA can provide useful insights for license renewal analyses, PRA should not be required specifically for license renewal purposes. The principle arguments raised at the workshop for not including a requirement for PRA in a rule were that the methodology for incorporating time dependent aging failure rates into a PRA is still evolving and that there is no consensus on standards and decision criteria when the aging models are used. The staff agrees with these arguments and has placed no PRA requirement in the conceptual rule. The staff notes, however, that licensee commitments made in response to Generic Letter 88-20 ensure that plants filing for license renewal will have completed at least a Level-1 PRA and estimates of releases. This analysis could be kept in a "living" form, or updated, if licensees interested in license renewal so choose. Further, such results could be extrapolated to a Level III PRA should the staff find a need for consequence estimates.

Current Licensing Basis - The staff's first key regulatory principle of license renewal is that the current licensing basis (CLB), with the exception of age-related degradation concerns, is sufficient to assure adequate protection if maintained throughout the term of the renewed license. On this basis, the staff proposed in the workshop version of the conceptual rule that the findings for issuance of a renewed license be focused on the CLB and age-related degradation, and that there would be no reconsideration of the 50.57 findings made at the issuance of the original operating license. NUMARC and Yankee Atomic urged the staff to go beyond this, by making generic findings in the statement of considerations for the license renewal rule regarding the adequacy of the CLB based upon the original 50.57 finding and the continuing NRC regulatory oversight activities that assures compliance of plants with their

individual CLBs. Under this generic approach, such findings would not have to be made in individual license renewal proceedings. The staff agrees that the acceptability of the CLB for license renewal should be addressed generically in the license renewal rulemaking, consistent with the staff's Regulatory Philosophy on License Renewal. The license renewal rule will be supported by a discussion in the statement of considerations of the general policy and technical basis for the adequacy of the current licensing basis and a discussion of the technical and policy reasons for excluding specific regulatory requirements from review in plant-specific license renewal applications. An interoffice team is undertaking the substantial work required to develop the technical foundation of this analysis.

The version of the conceptual rule provided for the workshop required a description of the current licensing basis in a license renewal application and a staff determination that the basis "has been completely and accurately described." Concern was expressed that a burdensome and unnecessary amount of information on the current licensing basis would be required to be submitted by licensees in a renewal application and that such submittal would lead to reconsideration of the adequacy of the current licensing basis. The staff continues to believe that the current licensing basis should be part of the renewal process so that the regulatory requirements of the current license are identified clearly and carried forward to the renewal license. For this reason, the staff proposes that applicants describe the current licensing basis in their application. The staff now believes that a determination of completeness and accuracy is not necessary because the same general purpose will be served as each license renewal applicant must perform a plant evaluation which demonstrates that degradation of the plant structures, systems and components have been identified, evaluated and properly accounted for to assure that the current licensing bases will be maintained throughout the term of the renewed license. The staff will provide a fuller justification for this position in the statement of considerations.

Severe Accidents - The inclusion of requirements in the conceptual rule regarding severe accident closure (individual plant examinations (IPEs) and accident management plans) was identified as a concern and many comments were received indicating that severe accident closure should be treated as part of the current licensing basis and not included in the rule. Severe accident closure was thought not to be a consideration for a renewal license. The staff agrees that the severe accident closure requirement should be removed from the conceptual rule. However, the importance of severe accident closure will be

emphasized in the statement of considerations. Specifically, the staff expects that licensees will have completed IPEs and either implemented or have in place accepted implementation schedules for modifications necessary to protect against severe accident vulnerabilities.

Screening Process - Concern was expressed that the screening requirements in the conceptual rule did not give adequate credit to existing programs for managing degradation and that they are excessively inclusive. Industry expressed concern that these requirements made the license renewal rule a de facto maintenance rule. This is not the staff's intent. The enclosed conceptual rule has been modified to address these concerns and it will be made clear in the statement of considerations that the intent of the rule is to credit existing regulatory programs in areas where degradation is being acceptably monitored, trended and controlled.

Backfit - The industry asserts that a backfit analysis should be prepared for the license renewal rule in order to impose discipline in the rulemaking process when determining what additional actions are necessary to adequately address age-related degradation. The industry also proposes that the license renewal rule contain a provision which explicitly imposes backfit requirements during the license renewal review process, in order to control the reconsideration of the adequacy of the current licensing basis (CLB). The Staff does not believe that a backfit analysis should be prepared for the license renewal rulemaking, since backfitting concerns are not relevant to the type of rulemaking represented by license renewal. Moreover, the regulatory analysis process, as well as the high degree of public interaction in this rulemaking should assure disciplined rulemaking. Nor does the Staff agree that a backfit provision is necessary in the license renewal rule to control reconsideration of the adequacy of the CLB. Such reconsideration is inconsistent with the Staff's first key regulatory principle for license renewal and is not reflected in the "Standards for Issuance of a Renewed License." Appropriate SRP guidance will be developed to preclude such reconsideration during license renewal reviews.

Hearings - The industry urged that special hearing procedures be established for license renewal. The staff at this time does not support the development of special hearing procedures just for license renewal hearings. Administrative Procedures Act provisions regarding timely renewal preclude concerns regarding interruption of operation due to protracted hearings.

Decommissioning and Irradiated Fuel Management - The staff has removed from the current draft of the conceptual rule language allowing postponement of compliance with requirements on decommissioning and irradiated fuel management when there is timely submission of a sufficient application for renewal. The staff supports this provision, as does industry, but wishes to further consider whether conforming changes in Part 50 are more appropriate than inclusion in Part 54.

License Renewal Program Plan

Several changes are proposed to the staff's program plan and schedule presented in SECY-89-275. Enclosure 5, "Plan for Completion of License Renewal Rulemaking," reflects these changes. The most significant changes are associated with the proposal to decouple the proposed Part 54 license renewal rulemaking from the generic environmental (Part 51) rulemaking. This decoupling will permit acceleration of the schedule so that the final Part 54 rule can be published in May 1991. This rule will be supported by an environmental assessment for which considerable progress has already been made. The Part 51 rulemaking remains on a schedule consistent with the plan previously provided to the Commission in SECY-89-275.

This accelerated schedule is designed to respond to industry's request to complete final action on the proposed Part 54 rule change prior to submittal of the first application for license renewal. It is an ambitious schedule which could be affected by many factors (e.g., number and type of comments received, success of the industry technical reports in alleviating the need for additional regulatory guides, obtaining OMB clearance, etc.). Therefore, as the program proceeds, the schedule will need to be periodically reassessed in light of these factors.

Another important change in the plan is that NRR, rather than RES, will have the lead responsibility for review of industry technical reports submitted by NUMARC. RES will provide technical support for these reviews. The staff anticipates that much of the necessary guidance will be dealt with in the industry technical reports.

Coordination:

The office of the General Counsel has reviewed this paper and has no legal objections to it.

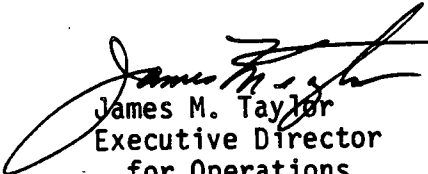
Recommendations:

The staff requests that the Commission:

1. Approve the attached program plan and schedule, which would result in publication of a proposed license renewal rule in June 1990, a final rule in May 1991, a draft generic environmental impact document and

proposed changes to Part 51 in May 1991, and the final generic environmental document and final changes to Part 51 in April 1992.

2. Note that the staff intends to place this Commission paper in the PDR promptly after the briefing, so that the public and industry have an early indication of staff responses to the public workshop.


James M. Taylor
Executive Director
for Operations

Enclosures:

- (1) 54 FR 41980
- (2) Public Workshop Questions
- (3) Results of the Workshop
- (4) Conceptual Rule
- (5) Plan and Schedule

Commissioners' comments should be provided directly to the Office of the Secretary by COB Thursday, February 15, 1990.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT Thursday, February 8, 1990, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional time for analytical review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

This paper is tentatively scheduled for discussion an at Open Meeting on Thursday, February 1, 1990. Please refer to the appropriate Weekly Commission Schedule, when published, for a specific time.

DISTRIBUTION:

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**NUCLEAR REGULATORY
COMMISSION****10 CFR Part 50****RIN 3150-AD04****Nuclear Power Plant License Renewal;
Public Workshop on Technical and
Policy Consideration****AGENCY:** Nuclear Regulatory
Commission.**ACTION:** Advance notice of proposed
rulemaking; notice of workshop.

SUMMARY: The Nuclear Regulatory Commission (NRC) has been considering what requirements should be placed on nuclear power plants in granting licenses to operate beyond the term of the initial 40-year license. Public comments on license renewal requirements have been solicited twice through the Federal Register. The first solicitation on seven major license renewal issues was published on November 8, 1986. The second solicitation was part of an advanced notice of proposed rulemaking published on August 29, 1988. The advance notice requested comments on NUREG-1317, "Regulatory Options for Nuclear Plant License Renewal," August 1988. Comments were summarized and analyzed in NUREG/CR-5332, "Survey and Analysis of Public Comments on NUREG-1317: Regulatory Options for Nuclear Plant License Renewal," March 1989. The NRC staff has now completed development of a tentative statement of regulatory requirements for license renewal. The staff wishes to receive comments on a number of specific technical and policy issues prior to drafting a proposed rule and draft regulatory guides for license renewal. In order to solicit information and comments on these issues from the public and regulated industry, the staff plans to conduct a workshop. Written comments on the material covered in the workshop will also be welcome. Advance notification of desire to make statements during the workshop is requested.

DATES: Notification of intent to attend the workshop, concurrent session preferences, and desire to make a statement during a specific session should be received by the staff no later than November 1, 1989. More detailed information on each session will be available after October 31, 1989. This information will be mailed to all individuals and organizations who notify NRC of their intent to attend and to others who request it. The workshop will be held on November 13 and 14.

1989. Written comments on matters covered by the workshop received by December 1, 1989, will be considered along with comments made during the workshop when drafting a proposed rule and draft regulatory guides.

ADDRESSES: The workshop will be held at the Sheraton Reston Hotel, 11810 Sunrise Valley Drive, Reston, VA 22091. Notification of intent to attend, desire to make a statement during a specific session, and written comments should be sent to Donald Cleary, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

FOR FURTHER INFORMATION CONTACT: Donald Cleary, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Telephone (301) 492-3936.

SUPPLEMENTARY INFORMATION:

Introduction

The workshop has been arranged for the purpose of eliciting information and views on the approach to license renewal rulemaking summarized in this notice. Special emphasis will be placed on substantive technical issues. The scope includes a broad range of regulatory issues, identification and bounding of the significant technical issues bearing on safety, the need for standards, and the appropriate role and scope of deterministic and probabilistic risk assessments in the safety evaluations involved. Views on the schedule for the rulemaking and alternatives for addressing National Environmental Policy Act (NEPA) issues are also included. The workshop will not deal with the numerous procedural issues which are central to the specification of a license renewal rule. Public comments have been solicited previously on two occasions. A solicitation for comments on seven major procedural and technical issues was published on November 6, 1986, "Request for Comments on Development of Policy for Nuclear Power Plant License Renewal," (51 FR, Vol. 51, pages 40334-40335). On August 29, 1988, an advanced notice of proposed rulemaking was published (53 FR, Vol. 53, pages 32919-32920). This notice solicited comments on NUREG-1317, "Regulatory Options for Nuclear Plant License Renewal," August 1988. Comments on the full range of procedural as well as technical and policy issues will be solicited again when a proposed license renewal rule is published about late May 1990.

The following material includes a tentative workshop agenda, discussion of how the workshop will be organized

and conducted, and information on issues and questions that will be covered in the workshop. Following the discussion of the workshop organization and conduct, a discussion is provided of the staff's preliminary regulatory philosophy and guiding principles for developing a proposed rule on license renewal. This discussion is followed by an outline of a conceptual approach to a license renewal rule, which illustrates how a rule embodying these principles might be structured. The primary technical focus of the workshop will be on sections XX.9, XX.19 and XX.25 of the rule outline. More detailed information on each session will be available after October 31, 1989. This information will be mailed to all individuals and organizations who notify NRC of their intent to attend and to others who request it. The workshop discussion and comments will assist the staff in developing the elements of a proposed license renewal rule.

Tentative Agenda

November 13, 1989

7:30 am Registration
8:30 am Introduction
8:45 am Regulatory Philosophy and General Approach
9:30 am Session 1—Overview of Conceptual Approach to a License Renewal Rule
10:00 am Break
10:15 am Session 1 Continued
12:00 pm Lunch
1:15 pm Concurrent Sessions (with one 20-minute break); Session 2—Reactor Pressure Boundary; Session 3—Fluid and Mechanical Systems; Session 4—Screening Systems, Structures and Components Important to Safety; Session 5—Continuation of Session 1
5:00 pm Adjourn

November 14, 1989

8:00 am Registration
8:30 am Concurrent Sessions (with one 20-minute break); Session 6—Containments; Session 7—Electrical Systems; Session 8—Environmental Effects
11:45 am Lunch
1:15 pm Summary of Breakout Sessions
2:45 pm Break
3:00 pm Comments and Discussion
4:00 pm Recap and Conclusions
4:30 pm Adjourn

Workshop Content and Structure

The workshop has been designed to elicit information and views on the policy and substantive technical issues involved in the nuclear power plant license renewal rulemaking and

regulatory guide development. The scope of issues to be covered by the workshop is broadly defined in the subsequent sections, "Preliminary Regulatory Philosophy and Approach for License Renewal Regulation" and "Outline of a Conceptual Approach to a License Renewal Rule." Discussion of the substantive technical requirements will be guided by sections XX.9 Content of Application—Technical Information, XX.19 Standards for Issuance of Renewal License, and XX.25 Additional Records and Recordkeeping Requirements in the outline of a conceptual approach.

The opening presentation on the staff preliminary regulatory philosophy and approach for license renewal is intended to provide an overview of the regulatory philosophy that the staff proposes as a basis for developing policy, technical, and legal positions regarding a license renewal rule. No comments will be taken at this point in the program. Opportunity for comment on issues raised in the opening presentation will be available as the issues are discussed in Sessions 1 and 5.

In Session 1 the staff will systematically review the spectrum of policy and technical issues that must be dealt with in developing a rule and regulatory guidance. The session will result in a common framework of information and understanding to be taken into the remainder of the sessions. Also the range of attendee views on various issues will begin to emerge through their comments. Areas to be covered include overall approach to formulating a rule, licensing basis for renewal, screening methodology, content of application, trending and recordkeeping, and National Environmental Policy Act (NEPA) requirements.

In Session 1 the staff will review and explain the requirements proposed in the outline and current thinking on the scope and content of regulatory guides. The staff is considering two key regulatory guides to accompany the rulemaking.

1. Guidance for Developing Technical Information for Nuclear Power Plant Operating License Renewal Applications. The scope of this guide will include:

- Methodology for selection of systems, structures, and components
- Identification of stressors and environment
- Identification of degradation sites at the installed location
- Aging mechanisms
- Tracking and recordkeeping

- Maintenance, refurbishment, replacement

2. Screening and Selection of Important-to-Safety Systems, Structures, and Components. The scope of this guide will include:

- Deterministic approach
 - Probabilistic risk method
 - Hybrid approach involving deterministic and probabilistic methods
- Two additional topics also have been identified for potential regulatory guides useful for implementing the rule.

1. Recordkeeping and Trending
2. Methods and Criteria for Fatigue Analysis

The following set of general questions are offered to aid in moving discussion from the general requirements stated in the outline to a more detailed evaluation of the technical issues that must be resolved in order to develop the concrete regulatory language of a proposed rule and draft regulatory guides.

- To what extent is it clear how each individual requirement in sections XX.9, XX.19, and XX.25 might be fulfilled?
- To what extent might there be a redundancy with existing regulations?
- What are problems and uncertainties in fulfilling each requirement?
- To what extent can these problems and uncertainties be dealt with in a rule?
- To what extent should these problems and uncertainties be dealt with in staff guidance documents? What guidance documents should be developed?
- To what extent should the license renewal process rely upon probabilistic risk assessment (PRA) insights, and what value might be associated with the conduct of a Level 3 PRA?

In Sessions 2, 3, 4, 6, and 7 the issues developed in Session 1 will be examined by applying these questions to four system, structure, and component groupings and to the screening of systems, structures, and components important to safety. In Session 5 the policy issues identified in Session 1 will be examined in greater depth.

Session 7 on environmental effects will explore the scheduling and merits of preparing a generic environmental assessment or impact statement, the findings of which could be codified in 10 CFR part 51. This would generically consider and bound to the extent possible the environmental effects of license renewal, thereby limiting the scope of effects that need to be evaluated in individual license renewal actions. Issues to be addressed include:

- Sources of initiators of environmental effects

- Scope and magnitude of potential effects
- Scope of severe accident analyses
- Spent fuel storage considerations
- Alternative sources of energy, scope of treatment
- Experimental knowledge, environmental studies, analyses and data sources
- Potential effectiveness of a generic environmental impact statement in bounding future plant-specific environmental impact statements

At each session the staff will first make a presentation; then comments will be taken from parties in the order in which they notified the staff of their intent to comment in a specific session. The order for comment will be:

1. Parties who notified the staff by November 1, 1989
2. Parties registering to comment prior to 8:30 a.m. the day of the session
3. Parties who have not given prior notice

Comments will be limited to 15 minutes for those representing organizations and 5 minutes for individuals. These limits may be adjusted up or down based on the number of commenters. A transcript will be made of the complete workshop.

Preliminary Regulatory Philosophy and Approach for License Renewal Regulation

The following discussion presents a general overview of the regulatory philosophy which the staff proposes be used in developing the policy, technical, and legal positions regarding a license renewal rule.

The regulatory policy that the staff proposes for license renewal is founded on two key principles. The first principle is that the "current licensing basis" at a specific reactor provides and maintains a level of safety for operation during the initial term that is sufficient to provide adequate assurance of the public health and safety and common defense and security, and that the same level of safety is also adequate for continued operation during any renewal period. The second and equally important principle is that any license renewal policy must provide assurance that the level of safety provided by a nuclear power plant's current licensing basis will not degrade during the renewal period.

The first principle is founded on the Commission's initial finding of adequate protection for the initial design and construction of a nuclear power plant, as well as the Commission's continuing oversight and regulatory actions with respect to nuclear power plants. The Commission may issue an operating

license to a utility only if it can make the findings required by 10 CFR 50.57. More specifically, the Commission must conclude that the facility will operate in compliance with the application as amended and the rules and regulations of the Commission. Further, the Commission must conclude that the authorized activities can be conducted without endangering the health and safety of the public and that the issuance of an operating license will not be inimical to the common defense and security or the public health and safety. Thus, when the Commission issues an initial operating license, it has determined that the design, construction, and proposed operation of the facility satisfies all of the Commission's requirements and provides adequate protection of the public health and safety and common defense and security.

However, the licensing basis upon which the Commission found adequate protection does not remain fixed for the term of the operating license. Rather, the licensing basis continues to evolve and expand during the term of operation, in part because of the continuing regulatory activities of the Commission. These include research, inspections, and the identification and resolution of potential safety concerns. New regulations are promulgated by the Commission that may require plant modifications on a plant-specific basis; generic and unresolved safety issues are resolved that may recommend that licenses evaluate and modify their designs; and additional evaluations are routinely required as the Commission identifies areas of plant operation that require additional understanding. Thus, the Commission-required changes to a plant's licensing basis provides ongoing assurance that the original Commission conclusion of adequate protection of the health and safety and common defense and security continue to remain valid throughout the remaining term of the facility's operating license.

The second principle follows from the first: if the current licensing basis provides adequate assurance to public health and safety and common defense and security, then licensees must continue to comply with the current licensing basis as it evolves in order for the Commission to have continued assurance of adequate protection. The staff believes that assurance of such compliance into the renewed period of operation rests on two factors: licensee programs for ensuring continued safe operation of the plant, and the Commission's regulatory oversight programs. The licensee programs

include self-inspection, maintenance, and surveillance programs that monitor and test the physical condition of plant equipment as the plant operates. Through these programs, licensees identify the degradation of components to a number of different environmental stressors and are, in general, able to replace or refurbish their equipment so that the necessary safety features would work when actually called upon under transient or accident conditions.

The Commission employs an oversight role in ensuring that the licensee programs are effective through its inspection program. The NRC inspection program historically has been constructed around a series of inspection procedures that provide for the routine examination of activities at an operating nuclear facility on a recurring schedule. The NRC inspection program employs a balanced look at a cross section of plant activities considered important to maintaining safety. It has the specific purpose of obtaining sufficient information on licensee performance, through direct observation and verification of licensee activities, to determine whether the facility is being operated safely; whether the licensee management control program is effective; and whether the regulatory requirements are being met. The program includes inspection of the licensee's performance in functional technical disciplines such as operations, radiological controls, maintenance, surveillance, environmental protection, physical security, and engineering. It is important to note, however, that implementation of the Commission inspection program does not supplant the licensee's programs or responsibilities. Rather, it provides a feedback mechanism and an independent verification of the effectiveness of the licensee's implementation of its programs to ensure that operations are being conducted safely and in accordance with applicable NRC requirements.

The staff is currently developing an approach for license renewal that embodies the principles outlined above. It is the staff's intention that the license renewal rule and accompanying regulatory materials will clearly define the safety requirements that the licensee must address in order for the Commission to approve the licensee's renewal application. The staff's current effort is focusing on two areas: (1) The definition of and regulatory requirements relative to the "current licensing basis," and (2) defining the technical requirements necessary to ensure continued assurance of adequate

protection during the renewed term of operation, with emphasis on degradation and aging.

With regard to the "current licensing basis," the staff intends to propose that the license renewal rule require the renewal application to contain a summary of all regulatory requirements and commitments so that the "current licensing basis" for the plant will be clearly understood and located in one document—the renewal application (which would be updated to the date of issuance of the renewal license). The staff is presently working to define the term, "current licensing basis." As currently being developed by the staff, it would include all the information and commitments contained in the current FSAR, as well as other docketed correspondence.

With respect to degradation and aging in the renewed term of operation, the staff is working to determine what licensee actions are required to provide assurance that systems, structures, and components important to continued safe plant operation will not be degraded by aging mechanisms such as fatigue, erosion, thermal or radiation-induced embrittlement, corrosion, service wear, and chemical effects. Those structures, systems, and components that are effectively covered by existing ongoing NRC requirements and/or licensee programs, or are not subject to aging mechanisms need not be addressed in the application (and need not be within the scope of the hearing process). While not completely developed at the moment, the scope of structures, systems and components (SSCs) to be addressed will probably be similar to that identified in the rulemaking for environmental qualification of electrical equipment. Licensees would then be required to identify where in existing plant programs, the degradation mechanisms are being monitored to provide reasonable assurance that replacement or refurbishment schedules for degrading equipment are being developed or service lifetime for equipment established. The staff is also considering whether additional recordkeeping requirements should be developed that would require retention of documentation regarding the design and environmental conditions for which the equipment must function, and the degradation mechanisms that might exist at the installed equipment location. A trending system of performance and key parameters may also be required to be instituted.

The staff is considering requirements related to severe accidents that must be satisfied as a precondition to

submission of a renewal application. In summary, the staff would propose that a renewal applicant have completed both the IPE and Accident Management programs. Further, the renewal applicant should have completed or have scheduled all planned plant modifications that were identified through these severe accident programs. The focus of this requirement would be to ensure that closure of the severe accident issues have been reached for the plant under its initial license prior to applying for the renewed license.

The staff intends to propose that the renewal decision depend on whether the facility provides adequate protection to the public health and safety and common defense and security, based upon the following factors: (1) Whether the current licensing basis has been accurately described, (2) whether the licensee has described an adequate program to address degradation or aging of SSCs that are important to safety, and (3) whether severe accident issues have been adequately addressed and resolved. Certain issues would not have to be addressed in the renewal application, although the description of "current licensing basis" for the facility would include the regulatory requirements and licensee commitments with respect to these issues, for purposes of having a legal basis for enforcement action during the renewed term. Issues likely to be excluded from the scope of the renewal decision include staffing, training program, organizational structure, operation QA program, health physics/ALARA programs, security program, procedures, structures, systems, and components covered under the inservice inspection (ISI) and inservice testing (IST) programs, containment testing and periodic surveillances specified in the technical specifications, emergency planning and EQ matters addressed by § 50.49, as well as others. Any lack of compliance by a licensee with these requirements is more appropriately the subject of a § 2.206 petition, and the circumstance of a renewal application should not provide a forum for assessing compliance with requirements that do not form the basis for the Commission's renewal decision. The license renewal rule, together with the recent changes to Part 2, will provide a framework for focusing any necessary hearings on the safety issues relevant to the license renewal decision.

The staff intends to propose that no application for renewal will be accepted more than 20 years before the expiration of the current operating license. In addition, it would propose that the

renewal term of a renewed license be limited to the balance of years remaining on the license currently in effect plus no more than an additional 20 years. The staff has not identified a firm technical concern that would justify this limitation; however, the staff wishes to proceed cautiously when projecting the remaining useful life of present reactors.

The staff believes that the timely renewal provision of 10 CFR 2.109 must be revised. Various estimates have been made concerning what is a reasonable time period for the review of a renewal application. Estimates by both the Commission and the industry suggest that a 2-to-3-year period (including hearings) may be necessary to approve a renewal of an operating license. Provided that a sufficient application is made in accordance with the timely renewal provisions of the revised § 2.109, plant operation under the provisions of the preexisting license may continue while the renewal application is under review. Recognizing that there is not a strong basis for selecting a particular cutoff time, the staff intends to propose that a sufficient application for renewal of an operating license should be received no later than 3 years prior to the expiration of the operating license in effect for the timely renewal provision to apply.

The staff will propose that the renewal license be a type of license that would become effective immediately and would void the license previously in effect. This license, termed a "supersession license," would remove any ambiguity that would otherwise exist concerning the conditions under which a licensee would operate a plant during any period that may overlap the issuance of the renewal license and the term of the pre-existing license.

Under §§ 50.54(bb) and 50.75, licensees are required to submit a funding plan for disposal of irradiated fuel and a funding plan for decommissioning. One year before the operating license is to expire, licensees are required by § 50.82 to file an application for termination of the operating license together with a decommissioning plan. The staff is considering exempting plants that have submitted acceptable renewal applications from these requirements while the applications are under staff review, but in no case more than 1 year after the expiration of the original operating license. If submission of the materials required by §§ 50.75(f), 50.54(bb), and 50.82 has been postponed and the license should withdraw its renewal application, or if the application

is denied, the staff believes that the licensee should provide the necessary plans no more than 6 months later.

With regard to compliance with the requirements of the National Environmental Policy Act (NEPA), the staff has determined that an environmental assessment is required at minimum to support the license renewal rulemaking. Apart from this task, the staff is considering two changes to the current regulations. First, the staff is evaluating whether the requirement in 10 CFR 51.20(b)(2) that an EIS be prepared for every license renewal application should be modified to allow the NRC the option of preparing an environmental assessment for the purpose of determining whether an EIS should be prepared. Second, the staff is considering whether either a generic assessment or a generic environmental impact statement (GEIS) should be prepared to describe and evaluate, on a generic basis, any environmental impacts that are common to, or may be enveloped by, all (or a significant number of) nuclear power plants. It is the staff's intention that if such a generic evaluation is prepared, its substantive findings would be adopted as a rule. The findings so codified could not be challenged in any individual license renewal proceeding unless an intervenor could show, on the basis of new information, that the evaluation and conclusions set forth in the rule were incorrect for the particular facility.

The staff does not intend to revise part 51's requirement that a renewal applicant submit a supplement to the existing environmental report prepared in connection with the initial licensing. Some clarifying changes in part 51 may be necessary to make clear that the supplemental environment report (ER) in support of a license renewal application should address those changes that have occurred since the initial licensing. In addition, if the Commission determines that a generic assessment or generic statement should be prepared, part 51 would be amended to specify that the ER provide a comparison of the plant-specific site parameters to those used in the generic document to identify environmental issues outside the scope of the generic evaluation. It would be necessary to compare the existing plant data with those used generically to ensure that the plant conditions were bounded by the generic evaluation.

The staff intends to propose a change to the Backfit Rule, 10 CFR 50.109, to specifically designate the issuance of a renewal license as an event after which the requirements of the Backfit Rule would apply. As presently written, the

Backfit Rule does not specifically refer to renewed licenses. The proposed change would remove any ambiguity in this regard.

Outline of a Conceptual Approach to a License Renewal Rule

XX.1 Purpose and Scope

This subpart governs the issuance of renewed operating licenses for nuclear power facilities licensed pursuant to sections 103 or 104b of the Atomic Energy Act of 1954, as amended (63 Stat. 919), and title II of the Energy Reorganization Act of 1974 (88 Stat. 1242).

XX.3 Definitions

As used in this part.

(a) "Current licensing basis" means the original licensing basis as described in the licensee's Final Safety Analysis Report (FSAR) at the time the initial license was granted plus those additional requirements that have been imposed and those commitments that have been made by the licensee during the period of plant operation up to the time of application for license renewal. This includes, but is not limited to, plant-specific compliance with the Commission regulations as prescribed in parts 2, 19, 20, 21, 30, 40, 50, 51, 55, 72, 73, 100 and the appendices thereto of title 10 of the Code of Federal Regulations; orders; license conditions; exemptions, except for those which have time dependence based on the expected plant life or whose technical evaluation would be affected by aging degradation; adjudicatory decisions; and technical specifications. In addition, the current licensing basis would include written commitments made in docketed correspondence such as responses to NRC bulletins and generic letters and other licensee correspondence.

(b) "Degradation mechanisms" means the aging phenomena identified in paragraph XX.9(c)(3) of this subpart.

(c) "Systems, structures, and components (SSCs) important to safety" means the purposes of this subpart:

(1) Safety-related SSCs, which are those relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the part 100 guidelines. Design basis events are defined the same as in 10 CFR 50.49(b)(1).

(2) Non-safety-related SSCs whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions specified in subparagraphs () through () of paragraph () of this definition by the safety-related SSCs.

(3) Certain post-accident monitoring equipment.

(d) "Nuclear power facilities" means a commercial nuclear power facility of a type described in 10 CFR 50.21(b) or 50.22.

(e) "Renewal term" means the period of time which is the sum of the remaining number of years on the operating license currently in effect, plus the additional amount of time beyond the expiration of the operating license (not to exceed 20 years) which is requested in the renewal application. The total number of years for any renewal term shall not exceed 40 years.

(f) All other terms in this part have the same meaning set out in 10 CFR 50.2 or section 11 of the Atomic Energy Act, as applicable.

XX.5 Filing of Application

(a) The filing of an application for a renewed license shall be in accordance with subpart A, part 2, and §§ 50.4 and 50.3 of this part.

(b) An application for a renewed license shall not be submitted to the Commission earlier than 20 years before the expiration of the operating license currently in effect.

(c) An applicant may combine an application for a renewed license with applications for other kinds of licenses.

(d) An application may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission, provided that such references are clear and specific.

(e) Applications shall be prepared such that all Restricted Data and other defense information are separated from unclassified information, in accordance with § 50.33(f).

(f) Notwithstanding § 2.109 of this title, a sufficient application for renewal of a nuclear power plant operating license must be filed no later than 3 years prior to expiration of the existing operating license for the timely renewal provision of that section to apply.

XX.7 Contents of Application—General Information

(a) Each application shall provide the information specified in § 50.33 (a) through (e), (b), (i) of part 50.

XX.9 Contents of Application—Technical Information

Each application for a renewed license shall include a Final Safety Analysis Report (FSAR). The FSAR shall include information that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the structures, systems, and components as a whole. Each FSAR shall include the following information:

(a) *Identification of Current Licensing Basis*—A description of the current licensing basis for the facility, including all regulations and exemptions therefrom, orders, license conditions, regulatory guides, and commitments made by the licensee in response to bulletins and generic letters.

(b) *Compliance with Current Licensing Basis*—[Certification that/description and analysis of how] the facility complies with the current licensing basis.

(c) *Degradation*—An evaluation demonstrating that degradation of the facility's structures, systems, and components have been identified, evaluated, and properly accounted for to ensure that the current licensing basis, including margins of safety inherent in the facility's licensing basis, will be maintained throughout the term of the renewed license. This evaluation shall:

- (1) Identify, using an acceptable methodology, all systems, structures, and components important to safety;
- (2) Identify the design requirements and functions and environmental conditions under which the equipment must operate, such as stress and load allowables, temperature, pressure, humidity, radiation, and chemistry at the installed location and under all design basis events;

(3) Determine which of the following degradation mechanisms may affect the systems, structures, and components identified in paragraph (c)(1) above:

- (i) Fatigue/Vibration
- (ii) Corrosion
- (iii) Erosion
- (iv) Service wear
- (v) Thermal embrittlement
- (vi) Radiation embrittlement
- (vii) Chemical and biological effects
- (viii) Creep/shrinkage
- (ix) Degradation due to operational environment

(4) Describe, with appropriate technical bases, what will ensure that the systems, structures, and components identified in paragraph (c)(1) will continue to maintain the design, functional, and environmental requirements identified in paragraph (c)(2) throughout the term of the

renewed license, for each of the degradation mechanisms determined to be relevant under paragraph (c)(3).

(5) A description and technical basis for a program of identifying, evaluating, and trending of the effects of all relevant degradation mechanisms for all SSCs important to safety.

(d) *Severe Accident Outliers Resolutions*—Sufficient documentation showing that the Individual Plant Examination (IPE) required by Generic Letter 88-20 has been completed and approved by the NRC staff, and a description and technical basis for all staff-approved corrective actions, including an Accident Management Program, which have been or will be implemented because of the results of the IPE. For those corrective actions that have not yet been implemented, a staff-approved schedule shall be provided showing the date of completion.

(e) *Technical Specifications*—A list of, and technical bases for, all technical specifications, which shall be prepared in accordance with the requirements of § 50.36 and shall properly account for any plant modifications and the degradation mechanisms and necessary activities identified in XX.9(c) above. Revisions made pursuant to the renewal application shall be clearly identified and annotated to show their relationship to previously approved technical specifications.

XX.11 Contents of Application—Environmental Information

(a) Each license renewal application shall include a supplement to the licensee's existing environmental report that complies with the requirements of subpart A of part 51 of this title.

XX.13 Postponement of Compliance with Requirements on Decommissioning and Irradiated Fuel Management

(a) If a sufficient application for a renewed license has been submitted in a timely manner and has not been denied, the submission of a preliminary decommissioning plan required by § 50.75(f), the notification and report required by § 50.54(bb), and submission of an application for termination of license under § 50.82 shall be postponed for that period of time until a final determination of the renewal application has been made by the Commission but no later than 1 year after the expiration date of the operating license currently in effect.

(b) If submission of the materials required by §§ 50.75(f), 50.54(bb), and 50.82 has been postponed pursuant to the section above and the application for a renewed license has been denied,

the licensee shall submit the required reports within 6 months of the disapproval.

XX.15 Report of the Advisory Committee on Reactor Safeguards

Each renewal application shall be referred to the Advisory Committee on Reactor Safeguards for a review and report. Any report shall be made part of the record of the application and made available to the public, except to the extent that security classification prevents disclosure.

XX.17 Hearings

A notice of an opportunity to request a hearing will be published in the Federal Register, in accordance with 10 CFR 2.105 of part 2. In the absence of a request therefor filed within 30 days by a person whose interest may be affected, the Commission may issue a renewed operating license without a hearing.

XX.19 Standards for Issuance of Renewed License

A renewed operating license may be issued by the Commission, up to the full term authorized by Section XX.21(b), upon finding on the basis of compliance with the standards set forth below, that there is reasonable assurance that the facility can be operated for the term of the license without endangering the public health and safety or the common defense and security:

(a) The current licensing basis for the facility has been completely and accurately described;

(b) All systems, structures, and components for the facility that are important to safety have been identified;

(c) All applicable degradation mechanisms have been identified for those structures, systems, and components;

(d) Appropriate actions have been or will be taken with respect to degradation of those systems, structures, and components, such that there is reasonable assurance that the activities authorized by the renewed operating license can be conducted in accordance with the current licensing basis;

(e) An acceptable program of identifying, evaluating and trending the effects of all relevant degradation mechanisms for all SSCs important to safety will be implemented at the plant.

XX.21 Issuance of Renewed License

(a) A renewed license shall be of the class for which the operating license currently in effect was issued.

(b) A renewed license will be issued for a fixed period of time to be specified in the license but in no case to exceed 40

years from the date of issuance. The term of a renewal license will be equal to the period of time remaining on the operating license currently in effect at the time of the approval of the application plus the additional period of time requested by the licensee (but no longer than 20 years), but not to exceed the estimated useful life of the facility.

(c) The renewed license shall become effective immediately upon its issuance, thereby superseding the operating license previously in effect.

(d) Each renewed license shall include appropriate provisions with respect to any uncompleted items of plant modification, and such limitations or conditions as are required to ensure that operation during the period of completion of such items will not endanger public health and safety.

XX.23 Requirements During Term of Renewed License

During the term of a renewed license, licensees shall continue to comply with all Commission regulations (including 10 CFR 50.59, 50.70, 50.71, 50.72, 50.73, 50.74, 50.75, and 50.78).

XX.25 Additional Records and Recordkeeping Requirements

A record of the documentation required by, or otherwise necessary to document compliance with the provisions of this subpart must be retained by the licensee in an auditable and retrievable form for the term of the renewed operating license.

Dated in Rockville, Maryland, this 10th day of October, 1989.

For the Nuclear Regulatory Commission
Warren Minners,

Director, Division of Safety Issue Resolution,
Office of Nuclear Regulatory Research.

[FR Doc. 89-24328 Filed 10-12-89; 8:45 am]

BILLING CODE 7590-01-M

**UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555**

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**PUBLIC WORKSHOP
ON
TECHNICAL AND POLICY CONSIDERATIONS
FOR
NUCLEAR POWER PLANT LICENSE RENEWAL**

November 13 - 14, 1989

Reston, Virginia

U.S. NUCLEAR REGULATORY COMMISSION

NRC LICENSE RENEWAL WORKSHOP

November 13, 1989

<u>Time</u>	<u>Subject</u>	<u>Session Leader(s)</u>	<u>Place</u>
7:30 am	Registration		Foyer of Room A
8:30 am	Introduction	E. Beckjord	Rooms A, B, & C
8:45 am	Regulatory Philosophy and Approach	J. Sniezek	Rooms A, B, & C
9:30 am	Session 1 - Overview of Conceptual Approach to a License Renewal Rule	F. Gillespie, R. Bosnak, L. Chandler	Rooms A, B, & C
10:00 am	Break		
10:15 am	Session 1 Continued		Rooms A, B, & C
12:00 am	Lunch		
1:15 pm	Concurrent Sessions		
	Session 2 - Reactor Pressure Boundary	J. Richardson, L. Shao	Room C
	Session 3 - Fluid and Mechanical System	J. Wermiel, M. Vagins	Room B
	Session 4 - Screening Methodology for System, Structures and Components Important to Safety	A. Thadani, M. Cunningham	Room A
	Session 5 - Overview of Conceptual Approach and Regulatory Framework - continued discussion from Session 1	C. Thomas, R. Bosnak, L. Chandler	Room 5
2:45 pm	Break		
3:00 pm	Sessions 2, 3, 4, and 5 Continue		
5:00 pm	Adjourn		

NRC LICENSE RENEWAL WORKSHOP

November 14, 1989

<u>Time</u>	<u>Subject</u>	<u>Session Leader(s)</u>	<u>Place</u>
8:00 am	Registration		Foyer of Room A
8:30 am	Concurrent Sessions Session 6 - Containments Session 7 - Electrical Systems Session 8 - Environmental Effects	J. Richardson, L. Shao A. Thadani, M. Vagins F. Gillespie, D. Cleary	Room C Room B Room A
10:00 am	Break		
10:15 am	Sessions Continue		
11:45 am	Lunch		
1:15 pm	Summary of Concurrent Sessions	T. Speis, All Session Leaders	Rooms A, B, & C
2:45 pm	Break		
3:00 pm	Comments and Discussion	T. Speis, All Session Leaders	Rooms A, B, & C
4:00 pm	Summary and Conclusion	T. Speis	Rooms A, B, & C
4:30 pm	Adjourn		

SPEAKERS AND SESSION LEADERS

WORKSHOP ON LICENSE RENEWAL

OFFICE OF NUCLEAR REGULATORY RESEARCH:

Eric S. Beckjord, Director

Themis P. Speis, Deputy Director for Generic Issues

Lawrence C. Shao, Director, Division of Engineering

Robert J. Bosnak, Deputy Director, Division of Engineering

**Milton Vagins, Chief, Electrical and Mechanical Engineering Branch,
Division of Engineering**

**Mark A. Cunningham, Chief, Probabilistic Risk Analysis Branch,
Division of Systems Research**

**Donald P. Cleary, Senior Task Manager, Reactor and Plant Safety
Issues Branch, Division of Safety Issue Resolution**

OFFICE OF NUCLEAR REACTOR REGULATION:

James H. Sniezek, Deputy Director

**Frank P. Gillespie, Director, Program Management, Policy
Development and Analysis Staff**

James E. Richardson, Director, Division of Engineering Technology

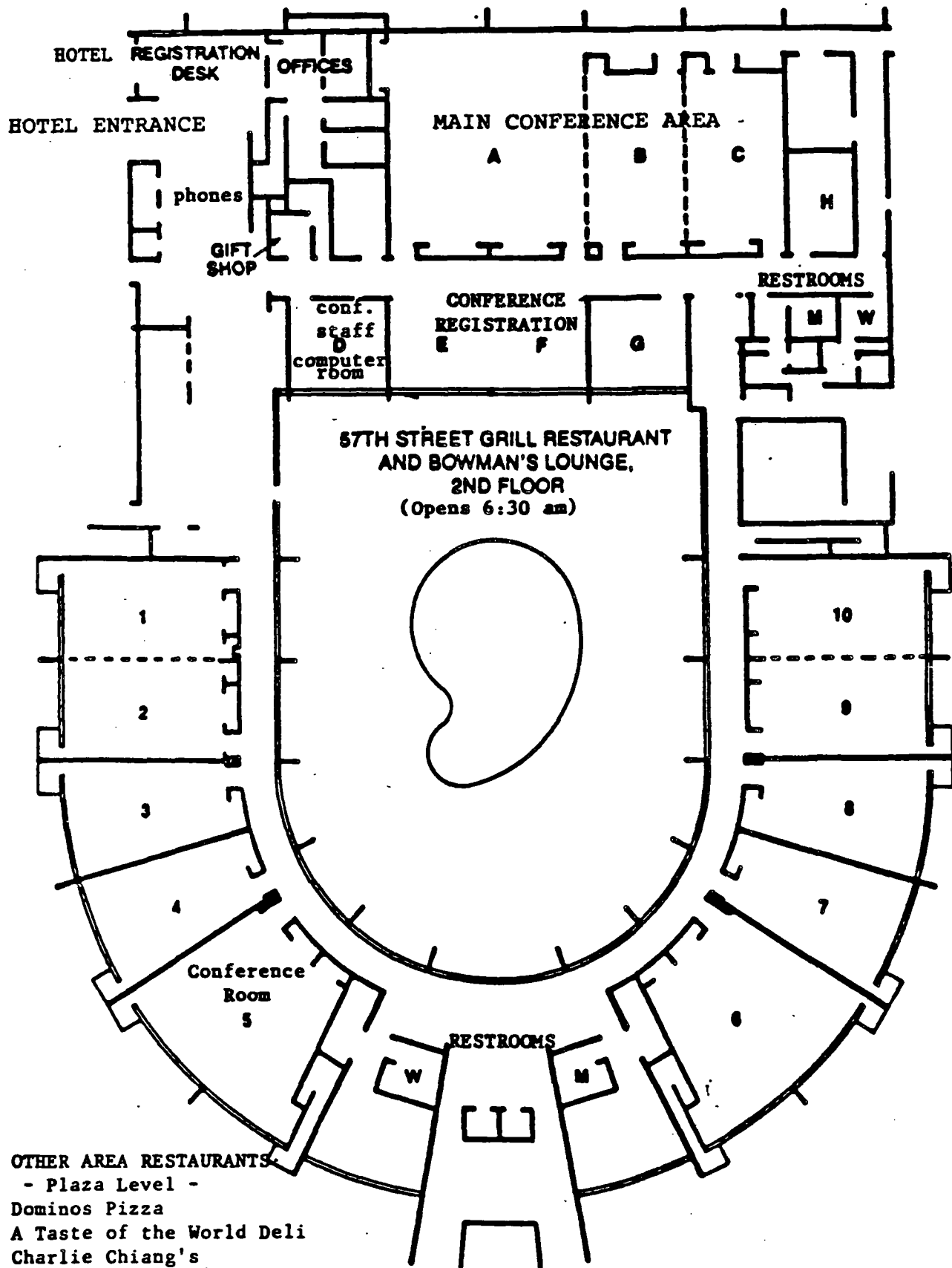
Ashok C. Thadani, Director, Division of System Technology

**Jarad S. Wermiel, Section Leader, Plant Systems Branch,
Division of System Technology**

OFFICE OF THE GENERAL COUNSEL:

**Lawrence J. Chandler, Assistant General Counsel for
Hearings and Enforcement**

HOTEL FACILITIES



U.S. NUCLEAR REGULATORY COMMISSION PUBLIC WORKSHOP
ON NUCLEAR POWER PLANT LICENSE RENEWAL
RESTON, VIRGINIA
NOVEMBER 13-14, 1989

Eric S. Beckjord, Director
Office of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Good morning ladies and gentlemen. I want to welcome you to the U.S. Nuclear Regulatory Commission's Public Workshop on Nuclear Power Plant License Renewal. The purpose of this workshop is to elicit public views on technical and policy considerations for nuclear power plant license renewal. I appreciate your attendance at this meeting and look forward to the discussion and obtaining your comments.

Extending the life of nuclear power plants beyond the current 40 year license period has the potential to save the country considerable energy resources. Nuclear power now produces about 18% of our electrical energy needs. By safely extending the life of a typical nuclear power plant by 20 years, it is estimated that the net benefit for each plant is about \$1 billion. Since the licenses of the current operating reactors will start to expire by the year 2000, it is important to establish the terms and conditions for license renewal by the early 1990s.

The NRC has been working on license renewal for several years and has actively sought public participation in this process. On two previous occasions, public comments have been solicited through the Federal Register. The first solicitation on seven major license renewal issues was published in November, 1986. The second solicitation was part of an advance notice of proposed rule-making published on August 29, 1988. The advance notice requested comments on NUREG-1317 entitled Regulatory Options for Nuclear Power Plant License Renewal. Over fifty written responses to NUREG-1317 were received. For those who are interested in reviewing the responses, a summary and analysis are presented in NUREG/CR-5532. The process of obtaining public input as the Commission develops its plans for license renewal is continuing with this workshop.

For the benefit of you who may not be familiar with the NRC's program on aging research, I would like to describe briefly this program since it is an important contributor to license renewal. The NRC has for a number of years been carrying out a program of aging research. Much of this effort can be directly applied to assuring the continued safety of operating nuclear plants for which extended licenses may be granted. The principal concern of the NRC's aging research is that plant safety could be compromised if the degradation of key components or structures and the effects of such degradation on system operation were not detected and mitigated well before a loss of functional capability. The technical safety issue here is that age-related degradation could result in a reduction of defense-in-depth.

The NRC aging research effort is directed toward gaining an understanding of degradation processes within nuclear power plants. This hardware-oriented engineering program is a rigorous and systematic investigation into the potentially adverse effects of aging on plant components, systems, and structures during the period of normal licensed plant operation, as well as the potential period of extended plant life for license renewals beyond 40 years.

The emphasis is on identifying and characterizing the mechanisms of material and component degradation during service and on using research results in the regulatory process. The research includes evaluating methods of inspection, surveillance, condition monitoring, and maintenance as a means of managing aging effects that may impact safe plant operation. Specifically, the goals of the program are

- o Identify and characterize aging effects that could cause degradation of components, systems, and structures.
- o Identify methods of inspection, surveillance, and monitoring, and evaluate residual life of components, systems, and structures that will ensure timely detection of significant aging effects before loss of safety function.
- o Evaluate the effectiveness of storage, maintenance, repair, and replacement practices in mitigating the rate and extent of degradation caused by aging.

I expect that the results of this program will be reflected in the sessions to be held during this workshop. Additional recent information on the aging research program can be obtained in the proceedings of the Seventeenth Water Reactor Safety Information Meeting.

I wish to review briefly the agenda for this workshop. The agenda has been arranged to obtain views on the technical and policy issues involved in license renewal. Input is requested as to what should be appropriately addressed in the rule and what should be included in regulatory guides to support a proposed rule. This morning's plenary session will open with the staff's presentation of regulatory philosophy and approach for license renewal. This will provide an overview of the basis for developing technical, policy and legal positions regarding a license renewal rule and the regulatory guides to support the rule. Following this presentation a series of questions which have been made available in the handout will be used to guide the presentation of comments. This session will generally track the conceptual rule as presented in the Federal Register Notice. The intent is to complete an overview tour through this material so that only a limited time will be spent on individual parts. This overview will then be expanded on in the concurrent sessions to be held this afternoon and tomorrow morning.

This afternoon's sessions will consist of four concurrent meetings with the topics being Reactor Pressure Boundary, Fluid and Mechanical Systems, Screening Systems Structures and Components Important to Safety and continuation of session one. The staff will make a very short introduction at the start of

each session, which will be guided by the series of questions for that session presented in the handout, followed by comments by parties who have previously notified the Commission. Additional comments may be allowed at the discretion of the individual session chairmen as time permits. Tomorrow morning's sessions will consist of three concurrent sessions with the topics being Containments, Electrical Systems and Environmental Effects and will be conducted in a similar manner. On tomorrow afternoon, a summary session will be held with all participants. Each chairman of the individual sessions will present a brief summary of his session. This will enable all participants to get an overview of the entire workshop. This will be followed by a general session for comments and conclusions. For your information, a verbatim transcript will be taken of all sessions, and will be available about the end of this week.

I wish to emphasize the importance that we place in obtaining your input to the Preliminary Regulatory Philosophy and conceptual approach to a License Renewal Rule. Thank you again for your attendance and participation in this workshop.

REGULATORY APPROACH AND PHILOSOPHY

by

JAMES H. SNIEZEK

DEPUTY DIRECTOR

OFFICE OF NUCLEAR REACTOR REGULATION

PUBLIC WORKSHOP ON LICENSE RENEWAL

NOVEMBER 13, 1989

PLANNED DISCUSSION TOPICS

- o Purpose of the workshop
- o Background
- o Regulatory Philosophy
- o Program Plan for License Renewal

PURPOSE OF THE LICENSE RENEWAL WORKSHOP

- o To inform the industry and public of the staff concept for license renewal
- o To obtain feedback on technical and policy issues
- o To obtain feedback on the framework regulatory language
- o To determine whether there are additional issues which should be dealt with in the regulatory process

BACKGROUND

- o FRN on License Renewal Policy Development, November 6, 1986
- o SECY-87-179, Status of Staff Activities and Report on Public Comments - July 21, 1987
- o Advance Notice of Proposed Rulemaking and NUREG-1317, "Regulatory Options for Nuclear Plant License Renewal," August 29, 1988
- o NUREG/CR-5332, "Summary and Analysis of Public Comments," March, 1989

MAJOR ISSUES REQUIRING RESOLUTION PRIOR TO PROPOSED RULEMAKING

- o License Renewal Basis and Scope**
- o Severe Accident Treatment**
- o Environmental Impact Treatment**

LICENSE RENEWAL PHILOSOPHY

- o Current licensing basis is sufficient for adequate protection of public health and safety
- o Maintain the current level of plant safety during the extended plant life

APPROACH FOR MAINTAINING CURRENT LEVEL OF PLANT SAFETY

- o Ensure that systems, structures and components will perform intended functions**
- o Focus attention on managing age-related degradation unique to extended life**
- o Credit given for ongoing regulatory and licensee programs**
- o Use industry technical studies for resolution of issues on generic basis**
- o Use NRC research findings for development of acceptance criteria**

SEVERE ACCIDENT TREATMENT

- o Resolved prior to submittal of license renewal application
 - IPE completed and submitted to staff
 - Accident Management Program in place
 - Corrective actions identified and agreed to by staff
 - Approved schedule for corrective actions

ENVIRONMENTAL IMPACT TREATMENT

- o Comply with NEPA requirements
 - Rulemaking to specify technical and procedural requirements
 - Actual relicensing of plants
- o Handle issues in generic manner
 - Environmental Assessment
 - Environmental Impact Statement
- o Plant-specific Environmental Reports

LICENSE RENEWAL PROGRAM PLAN

- o Rulemaking
- o GEA/GEIS
- o Regulatory Guidance Development
- o Industry Technical Report Program
- o Lead Plant Program

OVERALL SCHEDULE

- | | |
|--|---------------|
| o Publish proposed rule
for comment | June 1990 |
| o Publish proposed key
Regulatory Guides
SRP Sections, and
GEA/GEIS | December 1990 |
| o Pilot plant application | June 1991 |
| o Publish Final Rule,
key RGs, SRP and
GEA/GEIS | April 1992 |
| o Publish additional RGs
or SRP, as necessary | April 1993 |
| o Issue SER on Pilot
Plant application | June 1993 |

Session 1
Overview of Conceptual Approach
to a License Renewal Rule

Public Workshop
on Technical and Policy Considerations
for Nuclear Power Plant License Renewal
U. S. Nuclear Regulatory Commission
November 13-14, 1989, Reston, Virginia

SESSIONS 1 AND 5

OVERVIEW OF A CONCEPTUAL APPROACH TO A LICENSE RENEWAL RULE

I. Approach

1. Is the approach taken reasonable in light of known technical information?
2. Are the two principles stated in the philosophy discussion supported by the rule wording?
3. Are there any known technical or safety issues that would argue against the selected approach?
4. What areas of the philosophy need additional clarification?
5. Is the schedule for the rulemaking adequate to permit utilities to consider license renewal as an option for assuring adequate electrical supply?

II. Definition of the Licensing Basis

1. Has the current licensing basis been adequately defined?
2. What requirements, if any, should be included or deleted?
3. Are the requirements clear and is it clear how the requirements will be met?
4. What type and amount of documentation should be required as part of a renewal application?
5. What are the problems or issues in meeting the proposed requirements and is regulatory guidance needed in this area?

III. Exclusion of Regulatory Programs from Review

1. Should any identified programs or any other programs be included or excluded from review during a renewal application review? If so, identify those programs or issues and provide the technical or safety basis for the need to review or for exclusion from review.
2. Is it clear how the regulatory requirements of the programs excluded from review will continue to be met during a renewal term?

Sessions 1 and 5 Continued

IV. Envelope of Structures, Systems and Components to be Considered

1. Is equipment "important to safety" adequately defined and comprehensive?
2. Is it clear how the requirements will be met and what problems exist with establishing the envelope of "important to safety?"
3. Is it clear that this rule requires the review of mild environment electrical equipment in systems important to safety to the identified degradation mechanisms?

V. Degradation Mechanism

1. Are there any additional known degradation mechanisms which should be included in a license renewal rule? If so, identify the mechanism and cite references to technical information describing the mechanism.
2. Is it clear how the requirements for identifying the mechanisms will be met or is there a need for additional regulatory guidance in this area or are definitions needed for the categories of the degradation mechanisms?
3. Should definitions of the mechanisms be included in the rule?

VI. Severe Accidents

1. Should the staff require a completion of the Individual Plant Examination as a precondition to submission of a renewal application?
2. Should severe accidents have any additional role in a decision on renewal of an operating license?
3. Are the requirements clear and is it clear how the requirements can be met?
4. What are the problems or issues in meeting the proposed requirement and is additional regulatory guidance needed in this area?
5. Should the Accident Management Program be required to be in place?

VII. Content of Application

1. Are the requirements for what should be submitted clear and is it clear how those requirements are to be met?
2. Should a new FSAR be submitted in support of a renewal application or an addendum to the existing document?

Sessions 1 and 5 Continued

3. What amount of documentation of data, analyses and program changes should be provided in the application? Should the rule propose the types of information that can be retained in auditable forms at applicant locations?
4. Is additional regulatory guidance needed in this area and should publication of additional guidance in this area be linked to publication of the final rule?
5. Is more detail needed to provide a regulatory framework in the conceptual rule for a well-defined and acceptable screening process?

VIII. Certification of Compliance

1. Is the requirement clear and is it clear how the requirement will be met?
2. Should the NRC require applicants for renewal licenses to describe deviations from the SRP as is required of initial OL applicants?

IX. Environmental Information

1. Should the staff prepare a generic environmental statement which would discuss and envelope as many environmental issues as possible and which would then be used as a cited reference and preclude litigation in any relicensing proceeding?
2. Need for Separate rulemaking on Part 51 separate or with proposed rule?

X. Standards for Issuance of a Renewed License

1. Is it clear what the standards require and how the standards can be satisfied?
2. Do the specified standards provide reasonable assurance that a facility can be operated beyond its initial time or subsequent renewal terms? If not, what additional standards should be established for the issuance of renewal licenses?
3. Should a limit be placed on the number of renewals permitted at any one facility?

XI. Postponement of Compliance in the area of Decommissioning and Fuel Managements

1. Should a license renewal rule include an automatic postponement of the existing requirements or should it be necessary to have the renewal applicant specifically request a postponement or exemption from the stated requirements?

Sessions 1 and 5 Continued

2. Is the postponement period reasonable or should it be more limited in time, e.g. for one year or 2 years only?

XII. Maintenance, Surveillance and Recordkeeping

1. What, if any, maintenance practices should be required by a license renewal rule? (such as reliability centered maintenance.)
2. What type of process should be required by this regulation to assure that future changes in the maintenance or surveillance programs do not reduce the effectiveness of these programs in monitoring plant degradation mechanisms?
3. What specific standards for maintenance practices should be developed and issued in a regulatory guide related to license renewal?
4. What types and amount of documentation of existing or newly proposed maintenance practices should be submitted as part of a renewal application?
5. What types of documentation can provide a verification of insitu equipment condition and how much onsite inspection should be performed to validate the documentation?
6. What, if any, use and participation in NPRDS should be required in a license renewal application?
7. What steps should be required as part of a license renewal to assure that programmatic aspects of an enhanced maintenance program are effectively implemented?
8. What credit, if any, should be given for voluntary adoption and implementation of an industry standard for maintenance?
9. What type of information should be included or required of maintenance records for license renewal?
10. What specific requirements should be included for monitoring aging effects on specific critical components?
11. Should the proposed license renewal rule require a program for tracking maintenance records (performance trending) on specific safety-related equipment in order to monitor system performance, and how soon prior to submittal of the licensee renewal request should such a program be implemented?
12. When inspections have not been made or operating history records and trending information documentation have not been maintained, what alternative measures can be taken to justify extended life?
13. Can components which are "routinely maintained" be excluded from license renewal considerations unless there are agreed upon reliability goals for these components?

**OVERVIEW OF CONCEPTUAL APPROACH
TO A LICENSE RENEWAL RULE**

**F. GILLESPIE, NRR (POLICY ISSUES)
R. BOSNAK, RES (TECHNICAL ISSUES)
L. CHANDLER, OGC (LEGAL ISSUES)**

**PUBLIC WORKSHOP ON LICENSE RENEWAL
NOVEMBER 13, 1989**

TOPICS OF DISCUSSION

- o Renewal philosophy
- o Licensing basis
- o Severe accidents
- o Content of application
- o Standards for issuance
- o Backfit considerations
- o Hearings
- o Maintenance and records

LICENSE RENEWAL PHILOSOPHY

- o Current licensing basis is
sufficient for adequate
protection of public health
and safety**
- o Maintain the current level of
plant safety during the
extended plant life**

LICENSING BASIS

- o Establishes the envelope of regulatory compliance and enforcement for the renewal term**
- o Includes: Regulations of 10 CFR**
 - Orders**
 - License Conditions**
 - Exemptions**
 - Adjudicatory decisions**
 - Technical Specifications**
 - NRC Bulletins**
 - Generic Letters**
 - Docketed Correspondence**

**PROPOSED REGULATORY PROGRAMS NOT
SUBJECT TO REVIEW FOR LICENSE RENEWAL**

o Programs excluded:

Staffing and training programs

Operational QA programs

Health physics and ALARA programs

Security programs

Approved ISI and IST programs

Containment testing programs

Emergency plans

EQ covered by 10 CFR 50.49

**o Compliance concerns with above programs
to be treated under 10 CFR 2.206**

SEVERE ACCIDENTS

- o Subject to be resolved under initial license**
- o Precondition in rule to assure completion prior to application**
- o Completion includes:**
 - IPE including external events**
 - Accident Management Plan**
 - Approved schedule or completion of licensee proposed modifications**

CONTENT OF APPLICATION

- o Definition of licensing basis**
- o Certification of licensing basis**
- o Technical evaluations and SSC screening process**
- o Degradation mechanisms covered**
- o Basis for conclusions that degradation is properly monitored or corrected**
- o Technical specifications**
- o Environmental Report update**

STANDARDS FOR ISSUANCE OF LICENSE

- o Identifies only those areas on which the staff must make findings in order to issue a renewal license**
- o Regulatory areas not identified are not basis for issuance of renewal license**

STANDARDS FOR ISSUANCE (CONT.)

o Standards include:

1. Licensing basis has been completely and accurately defined
2. SSC important to safety have been identified
3. Applicable degradation mechanisms have been identified
4. Appropriate actions have been or will be taken to account for degradation
5. Acceptable program for trending and evaluation degradation effects

BACKFIT CONSIDERATIONS

- o Requirements specified in rule are not covered by backfit rule
- o Previous decisions on backfit for some technical issues may be revisited to determine if additional life significantly affects previous position
- o Backfit rule to apply after issuance of renewal license

LICENSE RENEWAL APPROACH

- o Are there any known technical or safety issues that would argue against the selected approach?
- o Is the philosophy implemented by the wording of the framework?
- o Is the schedule reasonable in light of public and utility interests?

SCREENING PROCESS AND CONTENT OF APPLICATION

- o Is equipment "important to safety" adequately defined?
- o Should degradation mechanisms be included in the rule?
- o What is an adequate level of documentation concerning data, analyses and program changes?
- o Is it clear how and why the certification of compliance is an essential part of application?
- o Is there a need for additional guidance?

LICENSING BASIS

- o Has licensing basis been adequately defined?
- o What is the necessary level of documentation in application?
- o Is it clear how the requirements will be met?
- o Are other regulatory programs candidates for exclusion from review for license renewal?

ROLE OF SEVERE ACCIDENTS

- o Should completion of IPE be an precondition of application?**
- o Should an Accident Management Plan be required?**
- o Should the question of severe accidents have any role in a license renewal decision?**

STANDARDS FOR ISSUANCE

- o Do the specific standards provide reasonable assurance that a facility can be operated safely for an extended term?
- o Should a limit be placed on the number of renewals?
- o Should a process for renewal of a renewal license be different than that for the first renewal and what would be a reasonable approach?

Session 2

Reactor Pressure Boundary

**Public Workshop
on Technical and Policy Considerations
for Nuclear Power Plant License Renewal
U. S. Nuclear Regulatory Commission
November 13-14, 1989, Reston, Virginia**

SESSION 2

REACTOR PRESSURE BOUNDARY

1. Since the surveillance programs required by Appendix H of 10 CFR 50 to monitor radiation embrittlement of reactor vessels generally have been designed for a 40 year period, what additional requirements should be implemented to comply with this Appendix for the extended life?
2. In view of the uncertainties involving the material properties of aged cast austenitic stainless steel, what measures are needed to assure safe operation of components manufactured of this material during extended plant life?
3. Do the current ISI and IST programs adequately address aging mechanisms in the reactor pressure boundary systems and components?
4. Many operating plants with piping which cracked due to IGSCC have had weld overlay repairs. While this repair is safe for current operations, NDE is difficult and stress patterns have been changed in the piping system. What bases exist to permit the continued use of such piping for extended plant life?
5. Since plants have used less efficient NDE techniques than are available today, should they be re-baselined with modern techniques? Should ISI intervals and extent of sampling remain the same? Considering loss of toughness with aging, should flaw acceptance standards be modified? Because of uncertainties in the level of degradation and in the effectiveness of ISI, should continuous monitoring NDE techniques be applied during extended life?
6. Existing fatigue requirements do not take into account the accelerated damage caused by water environment and higher temperatures of LWR plants. What provisions should be required to permit operating life to be safely extended without more definitive knowledge of this effect and how should these provisions affect the application of Miner's rule and the S-N curves applied in the ASME design code incorporated by reference into the NRC regulations? Should NDE techniques be used that give measures of remaining fatigue life and levels of toughness?
7. Are there any kinds of tests that should be done to demonstrate integrity and operability to qualify for extended life?

PRIMARY PRESSURE BOUNDARY

- o REACTOR VESSELS
- o STEAM GENERATORS
- o PIPINGS
- o PUMPS
- o VALVES

REACTOR VESSEL

- o NEUTRON IRRADIATION EMBRITTLEMENT OF BELTLINE MATERIALS
- o REGULATORY GUIDE 1.99, REV. 2 PROVIDES COMPUTATION
METHOD FOR CALCULATING EMBRITTLEMENT
- o COPPER, NICKEL, NEUTRON FLUENCE AND IRRADIATION
TEMPERATURE ARE IMPORTANT VARIABLES AFFECTING EMBRITTLEMENT
- o THERMAL FATIGUE
- o IRRADIATION ASSISTED STRESS CORROSION CRACKING OF VESSEL
INTERNALS AND CORE SUPPORT STRUCTURE

STEAM GENERATOR TUBES

- o PRIMARY SIDE STRESS CORROSION CRACKING
- o SECONDARY SIDE STRESS CORROSION CRACKING
- o FATIGUE (FLOW INDUCED VIBRATIONS)
- o DENTING (SUPPORT PLATE CORROSION)
- o INTERGRANULAR ATTACK
- o FRETTING & WEAR (FOREIGN OBJECTS)
- o PITTING
- o WASTAGE
- o STEAM GENERATOR PLUGS

PIPING

- o INTERGRANULAR STRESS CORROSION CRACKING (IGSCC)

CAUSED BY - SENSITIZED MATERIALS

- RESIDUAL STRESSES

- OXYGEN CONTENT AND IMPURITIES IN COOLANT WATER

- o EMBRITTLEMENT DUE TO AGING AT OPERATING TEMPERATURE
(PWR CAST S.S.)

- o THERMAL STRATIFICATION

- o EROSION/CORROSION

PUMPS

- o CUMULATIVE FATIGUE EFFECTS TO SHAFT
- c BEARING WEAR
- o DEGRADATION OF SEALS, GASKETS AND PACKING
- o EROSION AND CORROSION OF INTERNALS
- c DISTORTION OF SUBCOMPONENTS
- o LOOSENING OF PARTS

VALVES

- o CUMULATIVE FATIGUE EFFECTS TO DISC AND CONNECTIONS
- o SEAT WEAR
- o DEGRADATION OF SEAL AND MOTOR INSULATION
- o SET POINT DRIFT
- o EROSION AND CORROSION OF INTERNALS
- o DISTORTION OF INTERNAL PART
- o STEM AND GEAR WEAR
- o DISC/SEAT BINDING
- o WORN OR BROKEN BEARINGS
- o TORQUE SWITCH OR LIMIT SWITCH BINDING

Session 3
Fluid and Mechanical Systems

Public Workshop
on Technical and Policy Considerations
for Nuclear Power Plant License Renewal
U. S. Nuclear Regulatory Commission
November 13-14, 1989, Reston, Virginia

SESSION 3

FLUID AND MECHANICAL SYSTEMS

1. What additional criteria should the proposed license renewal rule and associated regulatory guidance contain regarding periodic surveillance and preventative maintenance to ensure the operability of mechanical equipment important to safety and fluid system performance beyond their initial design life?
2. What type of augmented inspections and/or analyses are needed to address aging mechanisms in pumps and valves, such as:
 - detection of degradation in pump and valve internals (e.g., erosion and corrosion due to flow turbulence and chemical attacks)
 - detection of possible cumulative fatigue of pump shafts which may lead to cracking.
 - detection of possible cumulative fatigue effects to valve discs and hinges due to cyclic stresses and impact loading from valve operation and flow excitations.
3. What should the proposed license renewal rule require regarding functional testing of systems important to safety as a prerequisite for license renewal, recognizing that such functional testing may not have been performed previously as part of the original licensing basis?
4. In light of the great variability in the treatment of fatigue in the design of Class I (or quality group A) piping and components, there is a need that license extension requirements be based on operating history of individual plants. How should the NRC confirm that Class I components have not exceeded their original fatigue design requirements? Also, should the industry address this issue in a topical report?
5. How can the residual fatigue life for Class 2 and 3 piping and components be determined for license renewal?
6. Existing fatigue requirements do not take into account the accelerated damage caused by water environment and higher temperatures of LWR plants. What provisions should be required to permit operating life to be safely extended without more definitive knowledge of this effect and how should these provisions affect the application of Miner's rule and the S-N curves applied in the ASME design code incorporated by reference into the NRC regulations? Should NDE techniques be used that give measures of remaining fatigue life and levels of toughness?
7. Are there any kinds of proof tests or hot functional tests that should be done to demonstrate integrity and operability to qualify for extended life?

APPROACH TO ESTABLISHING

SCOPE OF TECHNICAL ISSUES

1. DEFINES A PROPOSED SCREENING PROCESS FOR EQUIPMENT AND STRUCTURES TO BE REVIEWED
2. DEFINES STRUCTURES, SYSTEMS, AND COMPONENTS FOR EVALUATION
3. DEFINES SPECIFIC SET OF DEGRADATION MECHANISMS FOR EVALUATION
4. DEFINES REQUIREMENTS FOR CORRECTIVE ACTION WHEN DEGRADATION IS NOT BEING MONITORED

LICENSE RENEWAL WORKSHOP

SESSION 3

FLUID AND MECHANICAL SYSTEMS

1. ADDITIONAL CRITERIA FOR PERIODIC SURVEILLANCE AND PREVENTATIVE MAINTENANCE TO ENSURE OPERABILITY OF MECHANICAL EQUIPMENT BEYOND INITIAL DESIGN LIFE
2. AUGMENTED INSPECTIONS/ANALYSIS TO ADDRESS AGING MECHANISMS IN PUMPS AND VALVES
3. FUNCTIONAL TESTING OF SYSTEMS AS A PREREQUISITE FOR LICENSE RENEWAL
4. LONG TERM EFFECT OF FATIGUE ON CLASS I COMPONENTS
5. RESIDUAL FATIGUE LIFE FOR CLASS 2 AND 3 PIPING AND COMPONENTS
6. EFFECTS OF WATER ENVIRONMENT AND ELEVATED TEMPERATURES ON FATIGUE OF PIPING AND COMPONENTS
7. PROOF TESTING AND HOT FUNCTIONAL TESTING TO DEMONSTRATE INTEGRITY AND OPERABILITY

Session 4
Screening Methodology for Systems, Structures and
Components Important to Safety

Public Workshop
on Technical and Policy Considerations
for Nuclear Power Plant License Renewal
U. S. Nuclear Regulatory Commission
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SESSION 4

SCREENING METHODOLOGY FOR SYSTEMS, STRUCTURES AND COMPONENTS IMPORTANT TO SAFETY

1. Is the scope of the systems covered by the conceptual rule adequate to assure safety?
2. Are the requirements clear?
3. Is it clear how the screening process in the rule works and is it clear how the requirements of the rule will be met?
4. Should the regulation permit the use of screening methods that are based on probabilistic risk assessments? If yes, describe the type of assessment and the specific rule of the risk assessment. If no, provide an explanation for your answer.
5. Should experimental aging models be required in probabilistic risk assessments to estimate aging degradation effects?
6. What are any additional issues or problems that might arise in meeting the proposed requirements and how can these concerns be dealt with through regulatory instruments?
7. Can defense in depth be incorporated into the screening methods?
8. How should the NRC judge the adequacy of an aging data model for use in PRA?
9. What, if any, should be the role of a mandatory plant-specific data base in license renewal?
10. What types of data analysis should be used to detect increasing failure rates of components?
11. It is well known that the data used in PRAs can change the results as well as the ranking of the contributors to core damage frequency. If a PRA is used in license renewal, what role should plant specific data play in this area? How much data are required for plant specific applications?
12. PRAs normally do not include passive components as basic events in the logic models. How should passive components be treated in PRA for license renewal?
13. If a PRA is used in a screening process for license renewal, how should the human error probabilities be treated so that the PRA reflects the design and not the human actions?

Session 4 Continued

14. To what level of detail does a PRA need to be for use in license renewal? Does specific guidance exist for performing a PRA for license renewal?
15. What is the role of Level I PRA in license renewal? Level II? Level III?

APPROACH TO ESTABLISHING SCOPE OF TECHNICAL ISSUES

1. DEFINES A PROPOSED SCREENING PROCESS FOR EQUIPMENT AND STRUCTURES TO BE REVIEWED
2. DEFINES STRUCTURES, SYSTEMS, AND COMPONENTS FOR EVALUATION
3. DEFINES SPECIFIC SET OF DEGRADATION MECHANISMS FOR EVALUATION
4. DEFINES REQUIREMENTS FOR CORRECTIVE ACTION WHEN DEGRADATION IS NOT BEING MONITORED

LICENSE RENEWAL WORKSHOP

SESSION 4

SCREENING METHODOLOGY FOR SYSTEMS, STRUCTURES AND COMPONENTS IMPORTANT TO SAFETY

1. THE ADEQUACY OF THE SCOPE OF SYSTEMS COVERED BY
THE PROPOSED RULE
2. THE CLARITY OF REQUIREMENTS IN THE RULE
3. THE CLARITY OF THE SCREENING PROCESS
4. THE APPLICABILITY OF PRAs
5. THE NEED FOR EXPERIMENTAL AGING MODELS
6. THE RESOLUTION OF POTENTIAL ADDITIONAL PROBLEMS
IN MEETING THE PROPOSED REQUIREMENTS
7. INCORPORATION OF DEFENSE IN DEPTH

LICENSE RENEWAL WORKSHOP

SESSION 4 - CONTINUED

SCREENING METHODOLOGY FOR SYSTEMS, STRUCTURES AND COMPONENTS IMPORTANT TO SAFETY

8. THE ADEQUACY OF THE AGING DATA MODEL
9. THE ROLE OF MANDATORY PLANT-SPECIFIC DATA BASE
10. DATA ANALYSIS TO DETECT INCREASING FAILURE RATES
11. THE ROLE OF PLANT-SPECIFIC DATA IN PRAs USED IN
LICENSE RENEWAL
12. THE TREATMENT OF PASSIVE COMPONENTS IN PRAs USED
IN LICENSE RENEWAL
13. THE TREATMENT OF HUMAN ERROR PROBABILITIES IN
PRAs USED IN LICENSE RENEWAL
14. THE LEVEL OF DETAIL AND THE NEED FOR SPECIFIC
GUIDANCE FOR PRAs USED IN LICENSE RENEWAL
15. THE ROLE OF LEVEL I THRU III PRAs IN LICENSE RENEWAL

Session 5
Overview of Conceptual Approach
and Regulatory Framework
(continued discussion, see
Session 1 questions and notes)

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Session 6 Containments

**Public Workshop
on Technical and Policy Considerations
for Nuclear Power Plant License Renewal
U. S. Nuclear Regulatory Commission
November 13-14, 1989, Reston, Virginia**

SESSION 6

CONTAINMENTS

1. What additional measures should be taken to monitor and address anticipated and unanticipated structural degradations (including the loss of prestressing forces) such that an acceptable level of safety is maintained during the extended life?
2. For what additional degradation environments or mechanisms should containments be monitored or inspected? Also, how can detrimental long term chemical interactions in concrete containment be measured and predicted in the future?
3. Prior to granting a license renewal, should the licensee be required to implement (a) containment leak rate qualification test, (b) containment structural integrity test, and (c) containment configuration (including foundation) surveillance? For other Category I structures (including ultimate heat sink, water retaining structures), what type of surveillance should be required for detection of likely degradations during extended license?

SESSION 6

CONTAINMENTS

Background

- **Defense-In-Depth Concept**
Last Barrier To Contain Uncontrolled Release Of Fission Products In A Multiple Overlapping Successive System
- **Regulatory Design Requirements In 10 CFR 50, APP. A**
 - **Establishment Of A Leak-Tight Barrier**
 - **Assurance Of Not Exceeding Design Requirements For Postulated Accident Conditions**

TYPES OF STRUCTURAL DEGRADATIONS

- **Loss Of Tendon prestress in prestressed Concrete Containments**
- **Corrosion Of Tendons**
- **Corrosion Of BWR Mark I Drywell Shell**
- **Corrosion Of BWR Torus**
- **Corrosion Of PWR Ice Condenser Containment**
- **Potential Corrosion Of Rebars In Reinforced Concrete Containment**
- **Corrosion Of Rebars And Spalling Of Concrete In Intake Structures**

Session 7

Electrical Systems

**Public Workshop
on Technical and Policy Considerations
for Nuclear Power Plant License Renewal
U. S. Nuclear Regulatory Commission
November 13-14, 1989, Reston, Virginia**

SESSION 7

ELECTRICAL SYSTEMS

1. What should the proposed licensee renewal rule and associated regulatory guidance contain regarding additional criteria for testing, analysis, or replacement of electrical equipment currently included in the 10 CFR 50.49 Equipment Qualification Program which is qualified for a life less than the original license term plus the renewal period but is not subject to periodic replacement?
2. What additional programs are necessary to address aging degradation issues associated with electrical equipment important to safety but located in mild environments? What should the proposed license renewal rule or other associated regulatory guidance require with regard to additional qualification or operability verification for electrical equipment in mild environments which has a design life less than the license renewal period but which is not subject to periodic replacement?
3. Licensees have identified electrical components important to safety that have been assumed to have a life expectancy of 40 years but have been found to fail, or otherwise become unreliable, after 5 to 10 years in service. To what extent has the industry identified electrical equipment that is known to exhibit high failure rates in less than 40 years and what should be done to ensure reliable equipment performance to support license renewal?
4. Most cable has been qualified by manufacturers for 40 years. The 40 year life was predicated on certain installed and application conditions (including environmental stressors, cable electrical loading and cable mechanical loading) for which the cable was designed. Given that manufacturers have provided certain important initial parameters for new cable, what kind of program should be proposed that could be instituted to establish the insitu condition of cables and the potential degradation that would take place beyond the current design life? In addition, what insitu monitoring methods would be useful for an aging assessment of circuit breakers, relays, reactor protection systems, and electrical distribution systems?
5. What requirements should NRC issue as part of a license renewal rule for electrical equipment important to safety?
6. What should the proposed license renewal rule require regarding functional testing of electrical equipment important to safety as a prerequisite for license renewal, recognizing that such functional testing may not have been performed previously as part of the original licensing basis?

APPROACH TO ESTABLISHING SCOPE OF TECHNICAL ISSUES

1. DEFINES A PROPOSED SCREENING PROCESS
FOR EQUIPMENT AND STRUCTURES TO BE
REVIEWED
2. DEFINES STRUCTURES, SYSTEMS, AND
COMPONENTS FOR EVALUATION
3. DEFINES SPECIFIC SET OF DEGRADATION
MECHANISMS FOR EVALUATION
4. DEFINES REQUIREMENTS FOR CORRECTIVE :
ACTION WHEN DEGRADATION IS NOT BEING
MONITORED

LICENSE RENEWAL WORKSHOP

SESSION 7

ELECTRICAL SYSTEMS

1. ADDITIONAL CRITERIA FOR ELECTRICAL EQUIPMENT INCLUDED IN THE E.Q. PROGRAM BUT NOT PERIODICALLY REPLACED
2. ADDITIONAL PROGRAMS TO ADDRESS AGING DEGRADATION OF ELECTRICAL EQUIPMENT LOCATED IN MILD ENVIRONMENTS
3. PROGRAMS TO ESTABLISH THE INSITU CONDITION OF CABLES AND COMPONENTS AND THE POTENTIAL FOR FUTURE DEGRADATION
4. REQUIREMENTS WITHIN THE RULE FOR ELECTRICAL EQUIPMENT IMPORTANT TO SAFETY
5. FUNCTIONAL TESTING OF ELECTRICAL EQUIPMENT AS A PREREQUISITE FOR LICENSE RENEWAL

Session 8

Environmental Effects

**Public Workshop
on Technical and Policy Considerations
for Nuclear Power Plant License Renewal
U. S. Nuclear Regulatory Commission
November 13-14, 1989, Reston, Virginia**

SESSION 8

ENVIRONMENTAL EFFECTS

1. Is there any compelling reason not to permit the NRC the option of preparing an environmental assessment rather than an environmental impact statement (or supplement to) in individual relicensing actions as now required in 10 CFR 51?
2. To what extent might a generic environmental impact statement reduce the number and scope of environmental issues which would need to be addressed in individual relicensing actions?
3. What are the advantages and disadvantages of concurrent NEPA (10 CFR 51) and health and safety (10 CFR 50) rulemakings? Should these rulemakings be combined and pursued on the same schedule?
4. What are the potential sources of environmental effects from relicensing?
5. What are the potential magnitudes and significances of such environmental effects?
6. What experiential knowledge, studies and data are available to perform generic evaluations of potential environmental effects?
7. To what extent would such environmental effects differ from those experienced during the initial term of operation?
8. What should be the focus and scope of analysis of severe accident consequences in a generic environmental impact statement?
9. Should plant specific Level III PRA's be required in the NEPA severe accident consequence analysis?
10. To what extent should future availability of spent fuel storage capacity be a consideration in the generic environmental impact statement?
11. What should be the focus and scope of analysis of alternatives to relicensing the current generation of LWRs?
12. What role might utilities and Federal and State agencies play in the process of developing a generic environmental impact statement?

LICENSE RENEWAL WORKSHOP

Session 8

Environmental Effects

- **NEPA Review Is Required for:**
 - **License Renewal Rule -- NOW!**
 - **License Renewal Actions -- NOW or LATER?**
- **Alternative NEPA Documents**
- **Schedule Implications**
- **Sources of Environmental Effects**
- **Analysis**

LICENSE RENEWAL WORKSHOP

Session 8

Environmental Effects - Continued.

- **Significance of Effects**
- **Severe Accident Consequences**
- **Spent Fuel Storage Capacity**
- **Alternatives to Relicensing**
- **Contribution of Federal and State Agencies to a Generic Review**

RESULTS OF THE WORKSHOP ON TECHNICAL AND POLICY
CONSIDERATIONS FOR NUCLEAR POWER PLANT LICENSE
RENEWAL

This discussion summarizes the public workshop and provides a tentative evaluation of major comments received in the workshop.

Summary of Workshop

After receiving Commission approval to proceed with a public workshop on technical and policy considerations for nuclear power plant license renewal, a notice of the workshop was published in the Federal Register on October 13, 1989 (54 FR 41980). The notice included a tentative agenda, a discussion of workshop content and structure, a statement of the preliminary regulatory philosophy and approach for license renewal regulation, and an outline of a conceptual approach to a license renewal rule. A set of detailed questions to guide each workshop session was developed and prior to the workshop were mailed to individuals who had informed the staff of their intent to attend the workshop. A handout was available at the workshop which included these questions and staff presentations. Each session had discussion leaders from both NRR and RES and several sessions had OGC representation. Transcripts were made of the full workshop.

The workshop was held on November 13-14, 1989 in Reston, Virginia. Two hundred and one individuals (not including NRC staff) representing 97 organizations registered. A partial listing by category includes 61 individuals representing 27 electric utilities, 10 individuals representing 2 nuclear industry groups, 16 individuals representing 4 nuclear vendors, 5 individuals representing 2 architect-engineering firms, 38 industry consultants representing 26 firms, 4 individuals representing 4 state agencies, 2 journalists from 2 trade press organizations, and 1 individual from a public interest group.

Comments provided during the workshop were from industry representatives and individuals affiliated with the nuclear industry. The Nuclear Management and Resources Council (NUMARC), Yankee Atomic Electric Company and Northern States Power Company presented prepared comments at each session. Written comments were later provided by 12 organizations.

There was general agreement with the staff's regulatory philosophy and approach to license renewal. Concern was expressed, however, that certain requirements in the conceptual rule were not consistent with the statement of philosophy. Particular concern was expressed relative to documentation requirements for the current licensing basis and the role of such documentation in the license renewal review process. The view was strongly expressed that only the aging-related portions of the current licensing basis should be submitted and reviewed. Concern was expressed that the conceptual rule does not give

adequate credit to existing programs for managing aging, and that the requirements for identifying, evaluating, and trending of all degradation mechanisms are excessive and too prescriptive. Concern was expressed that the standards in the conceptual rule for issuance of renewal licenses are too comprehensive and should be related only to managing aging. The position was expressed that the backfit rule should apply to the license renewal review. PRAs were thought to be a useful tool but should not be required for license renewal. Commenters considered Level III PRAs as not necessary or particularly useful in license renewal decisions and should be optional in analyzing potential offsite environmental consequences in environmental reviews. Concern was expressed that the license renewal rule would replace the maintenance rule, which should be handled on its own merits. Commenters strongly urged publication of a final rule by May 1991, before submission of lead plant application, and completion of a generic environmental document and 10 CFR 51 rulemaking. A more detailed discussion of the major issues covered in the workshop follows.

Current Licensing Basis

Incorporation of Current Licensing Basis into Renewed License: A large number of comments were provided by the industry concerning the conceptual rule's requirement that a description of the current licensing basis be included in the renewal application, and a finding that the current licensing basis had been accurately and completely described in the application as a condition for issuance of the renewed license. The comments essentially fell into three areas. First, the industry saw no legal or policy reason for requiring each plant to identify its current licensing basis. Second, the industry claimed that a "description" of the current licensing basis would be a burdensome task. Finally, the industry believed that requiring the current licensing basis to be described would lead to NRC reconsideration of the adequacy of the current licensing basis for a plant, as well as the potential for litigation on contentions which question the adequacy of the current licensing basis.

Although the staff is considering these points, the staff believes that the current licensing basis must be identified in the renewal application. Since the renewed license is in essence a new license, the representations made in the original OL application (such as the FSAR) and during the initial OL term (such as responses to generic letters) would not be legally binding in the renewed term unless explicitly adopted by the licensee and made a part of the renewed license. The burden on the licensee is not expected to be large, since the licensee is explicitly permitted by the conceptual rule to incorporate by reference previous documents. It would not be necessary to copy the entire initial OL FSAR and resubmit it as part of the renewal application; a statement of adoption of the updated FSAR in the renewal application would be acceptable.

Although the current licensing basis must be identified in the renewal application, this requirement is not intended to be the basis for wholesale review of the adequacy of the current licensing basis for any plant. Such reconsideration of the adequacy of an individual plant's current licensing basis is inconsistent with the first key principle of the staff's regulatory philosophy, viz., that continued compliance with the current licensing basis

(excepting aging degradation issues) is sufficient to provide adequate protection to the public health and safety throughout the term of the renewed license. This principle will be captured and reflected in the license renewal rulemaking by: (a) explicitly defining in the license renewal rule the standards (criteria) by which disposition of a renewal application would be determined, (b) presenting in the statement of considerations the general policy and technical bases for the adequacy of the current licensing basis, and (c) presenting in the statement of considerations discussion of the continuing adequacy of ongoing regulatory requirements during the term of a renewed license. The staff believes that by precisely defining and limiting the standards for determining a renewal application, there will be no basis for the NRC to impose requirements at the time of renewal which are more stringent than those in the current licensing basis (other than those determined by the rule to be necessary to address aging degradation). In addition, this would narrow the potential scope of hearings as compared to the scope of initial operating license hearings, since intervenors would not be able to successfully raise contentions questioning the adequacy of a plant's current licensing basis.

Confirmation of Compliance with Current Licensing Basis: The industry strongly argued that confirmation of compliance with the current licensing basis at the time of relicensing, either by the licensee as part of its renewal application or by the staff as a necessary finding for issuance of a renewed license, should not be required. The basis for this position is that the licensee's programs for documenting design, construction and operational changes and updating the FSAR, and the NRC's inspection and audit programs, together provide assurance of continuing compliance with a facility's licensing basis. The industry also stated that certification of the accuracy of the current licensing basis description was unnecessary since 10 CFR 50.31 requires the application to be submitted under oath and affirmation. Upon consideration of these points, the Staff agrees that confirmation of facility compliance with the current licensing basis by the licensee or the staff should not be a requirement for issuance of a renewed license. A discussion of the technical and policy reasons for not requiring confirmation of conformance with specific regulatory requirements in the current licensing basis will be presented in the statement of considerations for the proposed rule.

Generic Environmental Document Effect on Schedule

In SECY-89-275 the staff identified three options for complying with the National Environmental Policy Act (NEPA) relative to the two distinct but related actions of promulgating a license renewal rule and relicensing individual nuclear power plants. The recommended option (option 3) was to combine in one document an analysis supporting the license renewal rule and analysis which would limit the number of environmental issues which could be litigated in individual relicensing actions. In SECY-89-288 the staff indicated that it wished to explore at the public workshop issuance of a final rule separate from and earlier than a final generic environmental impact statement. In the Staff Requirements Memorandum of October 11, 1989 the Commission instructed the staff to request comment on the schedule for the proposed rule and the options and schedule for the generic environmental impact statement.

The need for a GEIS and schedule were discussed in Session 1 "Overview of Conceptual Approach to a License Renewal Rule" and in Session 8 "Environmental Effects." In addition to options for meeting NEPA requirements and schedule implications, the session on environmental effects also covered a number of substantive issues related to the identification, analysis and significance of potential environmental effects and how a generic study might bound the range of site specific effects.

All speakers who addressed environmental matters supported the development of a generic environmental assessment (GEA), rather than a GEIS, to limit the scope of environmental effects which would need to be considered in individual plant specific license renewals. Those speakers also wanted the final license renewal rule to be published by May 1991 and to that end proposed that the license renewal rule be supported by an environmental assessment (EA). They stated that the final GEA and associated changes to Part 51 should be published in advance of the staff's completion of an SER on the lead plant. April 1992 seemed to be an acceptable publication date. NUMARC stated an interest in exploring initiatives which it could undertake to support data collection efforts for the GEA.

Based on the discussion at the workshop, the staff believes that the schedule should be modified to publish a proposed license renewal rule in June 1990 and to publish the final rule about 11 months later, in May 1991. The staff also believes that the Part 54 rule can be supported by an EA. A draft document which would provide the basis for the environmental assessment has already been completed. A draft environmental assessment can be completed on the same schedule as the proposed rule and would be published for comment along with the proposed rule. The scope and level of treatment of possible environmental effects will be sufficient to support the selection of the preferred set of requirements for license renewal. The environmental assessment would not be used to legally limit the scope of environmental effects treated in individual relicensing actions.

The staff recommends that the generic environmental document be developed in parallel with the rulemaking as the basis for a change to Part 51 to limit the environmental effect considered in individual relicensing actions. For the time being until the pre-scoping analysis proceeds further, the staff prefers to use the term generic environmental "document" rather than "assessment" or "impact statement." This document would be tiered on the environmental assessment. This document, however, must treat the set of potential environmental effects in sufficient detail to bound all site specific conditions. Due to the time required to gather site specific information and complete analyses, as well as to complete the public scoping process, a generic environmental document cannot be completed on the same schedule as proposed for the license renewal rule. A draft generic environmental document and proposed change to 10 CFR 51 could be completed for publication in May 1991 and the final in April 1992.

Severe Accidents

The staff desires to ensure that closure of severe accident issues has been reached for a plant under its initial license prior to applying for a renewed license. To that end the staff included a provision in the conceptual approach requiring documentation showing closure of Individual Plant Examination requirements, including the Accident Management Program.

Commentors pointed out that Generic Letter 88-20 will result in severe accident closure well in advance of all but a possible few license renewal applications and, therefore, will become part of the current licensing basis. Since severe accident closure is an action under the current license, it should not be a requirement for a renewed license. This position is consistent with the concept of not opening the adequacy of the current licensing basis to reexamination. Commentors suggested that the staff's concerns relative to severe accident closure be handled within the context of the statement of considerations rather than in specific requirements in the rule. The staff agrees and has no requirements for severe accident closure in the revised conceptual rule. The importance of severe accident closure prior to submittal of a renewal application will be discussed in the statement of considerations.

Screening Process

An area of substantial comment was that the conceptual approach to screening structures, systems and components (SSCs) seemed inconsistent with the published regulatory philosophy. Specifically, commentors noted that the conceptual rule did not seem to credit existing programs for managing degradation and that identification, evaluation and trending of all degradation mechanisms for regularly maintained or replaced SSC appeared excessive and all inclusive in the rule. The staff acknowledges that the conceptual rule requires clarification. The intent of the rule is to credit existing regulatory programs in areas where degradation is being monitored and controlled. Further, the staff was seeking responses from the workshop on the best way to regulate SSCs important to license renewal that were already part of periodic replacement or refurbishment programs. The staff has reevaluated the license renewal requirements for identification and documentation of SSCs important to license renewal and has modified the conceptual rule.

Probabilistic Risk Assessment

The staff believes there is a general consensus that probabilistic risk assessment is a useful tool in identifying core damage and other vulnerabilities. The role of probabilistic risk assessment in license renewal analysis and decisions was pursued during the workshop. The value of a Level-3 probabilistic risk assessment as part of license renewal was pursued in the sessions on Screening Methods (session 4) and Environmental Effects (session 8). Commentors agreed that since probabilistic risk assessment technology is not sufficiently developed relative to quantifying aging effects, it should not be required for license renewal; but, licensees should have the option of using it. Specifically, probabilistic risk assessment could be particularly useful in supporting component-specific evaluations. In addition, commentors pointed out that there are alternatives for treatment of off-site consequences under NEPA, thus, Level-3 probabilistic risk analysis should not be required to quantify offsite consequences. The staff agrees with these positions and, therefore, proposes that in the statement of considerations the potential role of probabilistic risk assessment be discussed.

Backfit

The industry asserts that a backfit analysis should be prepared for the license renewal rule in order to impose discipline in the rulemaking process when determining what additional actions are necessary to adequately address age-related degradation. The industry also proposes that the license renewal rule contain a provision which explicitly imposes backfit requirements during the license renewal review process, in order to control the reconsideration of the adequacy of the current licensing basis (CLB). Once a renewed license is issued, the industry believes that the Backfit Rule would continue to apply for the duration of the renewed license. The staff disagrees that a backfit analysis should be prepared for the license renewal rule, although it agrees that once a renewed license is issued, the Backfit Rule would apply to any backfits proposed during the term of the renewed license. The impetus for the Backfit Rule - regulatory stability - is not a valid concern with respect to license renewal. This is especially true with regard to age related degradation beyond the original 40 year licensing term. The staff believes that the industry's concern that a license renewal rule be a product of disciplined decisionmaking will be achieved by proper implementation of the regulatory analysis process, as well as the high degree of public interaction which the staff has sought with respect to this rulemaking. The staff intends to develop a license renewal rule which is sufficient to provide reasonable assurance of adequate protection and preserve the current enhanced level of protection. Therefore, a backfit analysis would not be required under 10 CFR 50.109(a)(4)(ii) for the rulemaking. The Staff also disagrees that a backfit provision is necessary in the license renewal rule to control reconsideration of the adequacy of the CLB. Such reconsideration is inconsistent with the Staff's first key regulatory principle for license renewal, which states that the CLB is sufficient to assure adequate protection, with the exception of age-related degradation concerns. Moreover, adequacy of the CLB is not a required finding under the "Standards for issuance of a Renewed License;" therefore, there would be no regulatory basis for reconsidering the adequacy of the CLB at the license renewal stage (unless, of course, there was new information available to the Staff and Commission, in which case the Staff or the Commission could act regardless of whether there was a license renewal application pending). To assure that individual Staff reviewers do not interpose objections to the adequacy of the CLB during the review of an individual license renewal application, the Staff intends to develop appropriate SRP guidance to preclude such reconsideration of the CLB.

Hearings

The industry urged that special hearing procedures be established for license renewal, which would encompass limits on the number of contentions and interrogatories which can be filed by an intervenor. The staff does not support the development of special hearing procedures as part of the license renewal rulemaking. The timely renewal doctrine of the Administrative Procedure Act allows the licensee to continue operating his facility until final determination of its renewal application, even though its original license has expired. Therefore, a licensee seeking a renewed license is not as substantially affected as the applicant for an initial OL. The staff also points out that the Commission has recently adopted changes to Part 2 (54 Fed. Reg. 33168, August 11, 1989), which raise the threshold for admission of

contentions, reduce discovery against the staff, and explicitly authorize the presiding officer to require the filing of cross-examination plans (the Union of Concerned Scientists has filed a suit in the D.C. Circuit challenging the validity of the changes to Part 2). These procedural changes, which are the results of over six-years of effort by the Regulatory Reform Task Force, with adequate public participation, are likely to be more effective in focusing and expediting any necessary hearing than the industry-proposed changes. Indeed, many of the changes proposed by the industry were considered and rejected by the Regulatory Reform Task Force and the staff. In addition, the staff intends to propose technical findings for issuance of a renewed license which focus primarily on aging degradation concerns and, therefore, are much narrower than the 10 CFR 50.57 findings for issuance of an initial OL. The scope of litigable environmental issues is also expected to be limited in any license renewal proceeding by virtue of the generic environmental rulemaking and generic environmental document.

Regulatory Guides

Comments were received that regulatory guides are needed on the format and content which addresses technical information for license renewal applications, and screening methodology for the selection of components, systems, and structures. The staff is in agreement with the workshop conclusions that the regulatory guides on the aforementioned topic are needed.

A preliminary draft of a regulatory guide on the format and content of license renewal applications which addresses technical information requirements, is currently being developed by the staff and will be published on the schedule provided in SECY-89-275. Regarding a regulatory guide addressing the selection of systems, structures and components, the staff is in the process of reviewing the industry report, submitted by the Nuclear Management and Resources Council, Inc., on "Methodology to Evaluate Plant Equipment for License Renewal" for endorsement in lieu of a staff generated regulatory guide. If a complete endorsement is not possible the staff will generate requisite supplemental guidance.

Decommissioning and Irradiated Fuel Management

The staff has removed from the current draft of the conceptual rule language allowing postponement of compliance with requirements on decommissioning and irradiated fuel management when there is timely submission of a sufficient application for renewal. The staff supports this provision, as does industry, but wishes to further consider whether conforming changes in Part 50 are more appropriate than inclusion in Part 54.

CONCEPTUAL RULE

PREFACE - CAVEAT ON CONCEPTUAL RULE REVISION

A revised Conceptual Rule for License Renewal has been developed by the staff as a tool for identifying and resolving issues regarding the implementation of the Staff's regulatory philosophy for license renewal in a rulemaking. The revised Conceptual Rule should be regarded as an interim document in the evolution of the license renewal rulemaking, since there are a number of issues where the staff has yet to agree on a proposed resolution and other issues where the technical support for tentative staff positions is not fully developed. It is expected that the Proposed Rule scheduled to be published in June 1990 will continue to evolve from the revised Conceptual Rule herein. However, the staff believes that the Commission should be informed of the staff's current views, so that the Commission can provide any necessary policy guidance at an early date. The staff is continuing its efforts to resolve these outstanding issues and develop regulatory language that will accurately and concisely reflect the staff's regulatory philosophy.

DRAFT 12/28/89

CONCEPTUAL RULE

REQUIREMENTS FOR RENEWAL OF OPERATING LICENSES FOR
NUCLEAR POWER PLANTS~~XX-1~~ 54.1 Purpose and Scope

This ~~SubPart~~ governs the issuance of renewed operating licenses for nuclear power plants licensed pursuant to Sections 103 or 104b of the Atomic Energy Act of 1954, as amended and Title II of the Energy Reorganization Act of 1974.

~~XX-3~~ 54.3 Definitions

As used in this Part,

(a) Current Licensing Basis - means the ~~original licensing basis as described in the licensee's Final Safety Analysis Report at the time the initial license was granted plus those additional requirements which have been imposed and those commitments which have been made by the licensee during the period of plant operation up to the time of application for license renewal.~~ NRC's requirements for a nuclear power plant at the time that the initial license for a nuclear power plant seeking renewal was granted and the licensee's commitments at the time the initial license was granted for complying with those requirements, including those to be documented in either the licensee's initial operating license application or Final Safety Analysis Report (FSAR) as modified and supplemented by requirements imposed by the NRC and commitments made by the licensee during the period of plant operation up to the filing of the renewal application. Specifically, this would include, but would not be limited to, plant-specific compliance with the Commission regulations as prescribed in Parts 2, 19, 20, 21, 30, 40, 50, 51, 55, 72, 73, 100 and Appendices thereto to Title 10 of the Code of Federal Regulations; orders; license conditions; exemptions, ~~except for those which have time dependence based on the expected plant life or whose technical evaluation would be affected by aging degradation; adjudicatory decisions and technical specifications.~~ In addition, the current licensing basis would include written commitments made in docketed licensing correspondence such as responses to NRC Bulletins and Generic Letters., ~~and other license correspondence.~~

~~(b) Degradation mechanisms - means the aging phenomena identified in paragraph XX.9 (c)(3) of this subpart.~~

(b) Age-related degradation - means a change to a component's material condition resulting in whole or part from one or more degradation mechanisms. Examples of such mechanisms include, but are not limited to, fatigue, vibration, corrosion, erosion, service wear, thermal embrittlement, radiation embrittlement, chemical and biological effects, creep, and shrinkage.

(c) Systems, structures and components (SSCs) important to safety license renewal - means:

(1) safety-related SSCs, which are those relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate the consequences of accidents that could result in potential offsite consequences comparable to the Part 100 guidelines. Design basis events are defined the same as in 10 CFR 50.49 (b)(1).

(2) nonsafety-related SSCs whose failure ~~under environmental accident conditions~~ could prevent satisfactory accomplishment of safety functions specified in ~~subparagraphs () through ()~~ paragraph (1) of this definition ~~by the safety-related SSCs~~.

(3) certain post-accident monitoring equipment as defined in 10 CFR 50.49 (b)(3).

(d) Nuclear power facilities plant - means a commercial nuclear power facility of a type described in 10 CFR Sections 50.21(b) or 50.22.

(e) Established effective program - means a program which assures that a structure, system or component important to license renewal will continue to perform its safety function during the renewal term. This program can include, but is not limited to, inspection, surveillance, maintenance, trending, recordkeeping, replacement, or refurbishment, and assessment of extended life, for timely mitigation of aging degradation, as appropriate, and shall:

- (1) be documented in the FSAR, approved by onsite review committees, and implemented by the facility operating procedures,
- (2) ensure that all structure, system or component safety functions and age-related degradation are properly evaluated by the program procedures, and
- (3) establish acceptance criteria against which the need for corrective action be evaluated and require that timely corrective action is taken when these criteria are not met.

~~(e)~~(f) Renewal term - means the period of time which is the sum of the remaining number of years on the operating license currently in effect, plus the additional amount of time beyond the expiration of the operating license (not to exceed 20 years) which is requested in the renewal application. The total number of years for any renewal term shall not exceed 40 years.

~~(f)~~(g) All other terms in this Part have the same meaning set out in 10 CFR 50.2 or Section 11 of the Atomic Energy Act , as applicable.

54.5 Interpretations

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

54.7 Written Communications

All applications, correspondence, reports, and other written communications shall be filed in accordance with applicable portions of 10 CFR 50.4.

54.9 Information Collection Requirements: OMB approval

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this Part to the office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act of 1980 (44 U. S. C. 3501, et seq.). OMB has approved the information collection requirements contained in the Part under control number _____.

(b) The approved information collection requirements contained in this Part appear in _____.

XX-5 54.11 Filing of Application

(a) The filing of an application for a renewed license shall be in accordance with Subpart A, Part 2 and Sections 50.4 and 50.30 of ~~this Part~~ 10 CFR Part 50.

(b) An application for a renewed license shall not be submitted to the Commission earlier than 20 years before the expiration of the operating license currently in effect.

(c) An applicant may combine an application for a renewed license with applications for other kinds of licenses.

(d) An application may incorporate by reference information contained in previous applications for licenses or license amendments, statements, correspondence or reports filed with the Commission, provided that such references are clear and specific.

(e) Applications shall be prepared such that all Restricted Data and other defense information are separated from unclassified information, in accordance with Section 50.33(j) of Part 50.

(f) Notwithstanding Section 2.109 of this Title, a sufficient application for renewal of a nuclear power plant operating license must be filed no later than three years prior to expiration of the existing operating license for the timely renewal provision of that Section to apply.

~~XX-7~~ 54.13 Contents of Application - General Information

Each application shall update or provide the information specified in Section 50.33 (a) through (e), (h) and (i) ~~of Part 50~~, as necessary. In addition, it shall include a general description of the facility, sufficient for understanding the remaining sections of the application.

~~XX-9~~ 54.15 Contents of Application - Technical Information

Each application for a renewed license shall include a Final Safety Analysis Report (FSAR). Alternatively, the application may incorporate by reference the existing updated FSAR, updated as necessary to present the information required by this Part. The FSAR shall include information that describes the facility, presents the design bases and the limits of operation, and presents a safety analysis of the structures, systems, and components as a whole. In addition it shall include an evaluation of the degradation of the plant systems, structures, and components and demonstrate that the effects of such degradation will be effectively managed throughout the renewal term. Each FSAR shall include the following information:

(a) Identification of Current licensing Basis - A description of the current licensing basis for the facility, including all regulations and exemptions therefrom, orders, license conditions, technical specifications regulatory guides and written commitments made in docketed licensing correspondence such as by the licensee in responses to NRC Bulletins and Generic Letters.

~~(b) Compliance with Current Licensing Basis - [Certification that/description and analysis how] the facility complies with the current licensing basis.~~

~~(b) (c) — Degradation Integrated Plant Review~~ - An evaluation demonstrating that degradation of the facility's structures, systems and components have been identified, evaluated and properly accounted for to assure that the ~~current licensing basis~~ an acceptable level of safety, including margins of safety inherent in the facility's licensing basis, will be maintained throughout the term of the renewed license. This evaluation shall include:

~~(1) Identify, using an acceptable methodology, all systems, structures and components important to safety~~

A list of all systems and structures important to license renewal, as defined in Section 54.3 (c);

~~(2) Identify the design requirements and functions, and environmental conditions under which the equipment must operate, such as stress and load allowables, temperature, pressure, humidity, radiation, and chemistry at the installed location and under all design basis events~~

Identification of those components from (1) above that contribute to the performance of the system or structure safety function or whose failure could preclude a system or structure from performing its intended safety function;

~~(3) Determine which of the following degradation mechanisms may affect the systems, structures, and components identified in paragraph (c)(1) above:~~

- ~~(i) Fatigue/Vibration~~
- ~~(ii) Corrosion~~
- ~~(iii) Erosion~~
- ~~(iv) Service wear~~
- ~~(v) Thermal embrittlement~~
- ~~(vi) Radiation embrittlement~~
- ~~(vii) Chemical and biological effects~~
- ~~(viii) Creep/Shrinkage~~
- ~~(ix) Degradation due to operational environment~~

A listing, with a summary justification, of those systems, structures and components identified in (1) and (2) above that are subject to an established effective program, as defined in Section 54.3 (e), which will continue to assure the capability of the component to perform its safety functions during the renewal term;

~~(4) Describe, with appropriate technical bases, what will ensure that the systems, structures, and components identified in paragraph (c)(1) will continue to maintain the design, functional and environmental requirements identified in paragraph (c)(2) throughout the term of the renewed license, for each of the degradation mechanisms determined to be relevant under paragraph (c)(3).~~

For those components or structures remaining from (3) above,

describe and provide justification for actions taken or to be taken to manage the identified age-related degradation. Such actions could include demonstration, by detailed evaluation, that the identified degradation will not significantly affect safety; maintenance, component replacement or refurbishment; modification of operating practices; or establishment of a program to evaluate and trend effects of the identified degradation during the renewal term. Justification of any action would include information concerning the component design requirements, functions, environmental conditions, and the identified degradation, as necessary to demonstrate that the action will be effective in assuring the continued safe operation of the plant.

~~(5) a description and technical bases for a program of identifying, evaluating and trending of the effects of all relevant degradation mechanisms for all SSCs important to safety.~~

(c) Exemptions - A list of all plant-specific exemptions, exceptions, and reliefs granted shall be provided. For any exemption, exception, or relief granted on the basis of an assumed service life or period of operation bound by the original license term of the facility, a justification for continuing the exemption, exception or relief shall be provided.

~~(d) Severe Accident Outliers Resolution - Sufficient documentation showing that the Individual Plant Examination (IPE) required by Generic Letter 88-20 has been completed and approved by the NRC staff, and a description and technical basis for all staff-approved corrective actions, including an Accident Management Program, which have been or will be implemented as a result of the results of the IPE. For those corrective actions which have not yet been implemented, a staff-approved schedule shall be provided showing the date of completion.~~

(d)(e) Technical Specifications - A list of, and technical bases for, all proposed changes to the technical specifications which shall be prepared in accordance with the requirements of Section 50.36 and shall properly account for any plant modifications and the degradation mechanisms and necessary activities identified in paragraph ~~(5)~~ (4) above. Revisions made pursuant to the renewal application shall be clearly identified and annotated to show their relation to previously-approved technical specifications.

XX.11 54.17 Contents of Application - Environmental Information

Each license renewal application shall include an environmental report which addresses the environmental effects of operation through the renewal term. This report may take the form of a supplement to the licensee's existing environmental report. ~~which~~ ~~complies~~ this report shall comply with the requirements of Subpart

A of Part 51 of this Title.

~~XX.13 Postponement of Compliance with Requirements on
Decommissioning and Irradiated Fuel Management~~

~~(a) If a sufficient application for a renewed license has been timely submitted and has not been denied, the submission of a preliminary decommissioning plan required by Section 50.75(f), the notification and report required by Section 50.54(bb), and submission of an application for termination of license under Section 50.82 shall be postponed for that period of time until a final determination of the renewal application has been made by the Commission but no later than one year after the expiration date of the operating license currently in effect.~~

~~(b) If submission of the materials required by Sections 50.75(f), 50.54(bb) and 50.82 has been postponed pursuant to the section above, and the application for a renewed license has been denied, the licensee shall submit the required reports within 6 months of the disapproval~~

XX.15 54.19 Report of the Advisory Committee on Reactor Safeguards

Each renewal application shall be referred to the Advisory Committee on Reactor Safeguards for a review and report. Any report shall be made part of the record of the application and made available to the public, except to the extent that security classification prevents disclosure.

XX.17 54.21 Hearings

A notice of an opportunity to request a hearing will be published in the Federal Register, in accordance with Section 2.105 of Part 2. In the absence of a request therefor filed within 30 days by a person whose interest may be affected, the Commission may issue a renewed operating license without a hearing, upon 30 day notice and publication once in the Federal Register of its intent to do so.

XX.19 54.23 Standards for Issuance of a Renewed License

A renewed operating license may be issued by the Commission, up to the full term authorized by Section 54.3, upon finding on the basis of compliance with the standards set forth below, that there is reasonable assurance that the facility can be operated for the term of the license without endangering the public health and safety or the common defense and security:

~~(a) the current licensing basis for the facility has been~~

~~completely and accurately described;~~

~~(b)~~(a) all systems, structures, and components for the facility that are important to ~~safety~~ license renewal have been identified;

~~(e)~~(b) all applicable degradation mechanisms have been identified for those structures, systems and components;

~~(d)~~(c) appropriate actions have been or will be taken with respect to degradation of those systems, structures, and components, such that there is reasonable assurance that the

activities authorized by the renewed operating license can be conducted in accordance with the current licensing basis;

~~(e)~~(d) an acceptable program of identifying, evaluating and trending the effects of all relevant degradation mechanisms for all SSCs important to license renewal will be implemented at the plant.

~~XX.21~~ 54.25 Issuance of a Renewed License

(a) A renewed license shall be of the class for which the operating license currently in effect was issued.

(b) A renewed license will be issued for a fixed period of time to be specified in the license but in no case to exceed 40 years from the date of issuance. The term of a renewal license will be equal to the period of time remaining on the operating license currently in effect at the time of the approval of the application plus the additional period of time requested by the licensee (but no longer than 20 years). A renewed license may be subsequently renewed upon expiration of the renewal term, provided all applicable standards under this Part can be satisfied.

(c) The renewed license shall become effective immediately upon its issuance, thereby superseding the operating license previously in effect.

(d) Each renewed license shall include appropriate provisions with respect to any uncompleted items of plant modification, and such limitations or conditions as are required to assure that operation during the period of completion of such items will not endanger public health and safety.

~~XX.23~~ 54.27 Requirements during term of renewed license

During the term of a renewed license, licensees shall continue to comply with all Commission regulations ~~(including 10 CFR Sections 50.59, 50.70, 50.71, 50.72, 50.73, 50.74, 50.75, and 50.78)~~

contained in 10 CFR parts 2, 19, 20, 21, 30, 40, 50, 51, 55, 72, 73, 100 and Appendices thereto.

~~XX-25~~ 54.29 Additional records and recordkeeping requirements
A record of the documentation required by, or otherwise necessary to document compliance with the provisions of this subPart, and a record of the administrative process for controlling changes to such documents must be retained by the licensee in an auditable and retrievable form for the term of the renewed operating license. This would include a listing of and the justification for structures, systems and components important to license renewal included in established effective programs as defined in Section 54.3 (e).

REQUIRED AMENDMENTS TO CURRENT REGULATIONS
TO ACCOMMODATE LICENSE RENEWAL

10 CFR 2.109 Effect of timely renewal application

(a) Except for the renewal of an operating license for a nuclear power plant license under 10 CFR 50.21 (b) or 50.22, if at least 30 days prior to the expiration of an existing license authorizing any activity of a continuing nature the licensee files an application for the activity so authorized, the existing license will not be deemed to have expired until the application has been finally determined.

(b) If the licensee of a nuclear power plant licensed under 10 CFR 50.21(b) or 50.22 files an application for renewal of an operating license at least 3 years prior to the expiration of the existing license, the existing license will not be deemed to have expired until the application has been finally determined. However, the existing license will not be deemed to have expired even if the renewal application was filed less than three years prior to expiration of the existing license, if the licensee demonstrates that changed circumstances have occurred which justify the untimely application.

10 CFR 50.109 Backfitting

(a)(1)(iii) The date of issuance of the operating license for the facility for facilities having operating licenses; or

(iv) The date of issuance of a renewed operating license; or

~~(iv)~~ (v) The date of issuance of the design approval under Appendix M, N, or O of this Part.

10 CFR 51.20 Criteria for and identification of licensing and regulatory actions requiring environmental impact statements

(b)(2) Issuance ~~or renewal~~ of a full power or design capacity license to operate a nuclear power reactor, and issuance or renewal of a full power or design capacity license to operate a testing facility or fuel reprocessing plant pursuant to Part 0 of this chapter.

10 CFR 51.53 Supplement to environmental report

(TO BE DEVELOPED) license renewal.

PLAN FOR COMPLETION OF LICENSE
RENEWAL RULEMAKING
(Revised December 1989)

INTRODUCTION

In a memorandum dated June 16, 1989 the Executive Director for Operations requested the Directors of the Office of Nuclear Reactor Regulation and the Office of Nuclear Regulatory Research to provide a schedule and resource needs to have a final rule and prepare a generic environmental impact statement (GEIS) by April 1992. In a staff requirements memorandum dated July 7, 1989 the staff was requested to submit a program plan and projected resource requirements for developing the regulatory requirements for license renewal to the Commission for review and approval by August 31, 1989. In SECY-89-275, dated September 1, 1989 the staff identified the work to be accomplished, schedules, and resource requirements. The program plan provided for publication of a final rule, final generic environmental impact statement and key regulatory guides by April 1992. In a staff requirements memorandum dated October 4, 1989 the Commission approved a staff proposal to hold a public workshop on license renewal in November 1989 and requested that the staff report on the workshop and on resulting proposed revisions to the program plan and schedule for the rule and GED. Proposed revisions are incorporated in the following sections. These revisions provide for publication of the final rule and key regulatory guide by May 1991.

WORK TO BE PERFORMED

The license renewal rulemaking package and associated activities involve several work efforts and products.

- Rule and statement of considerations
- Regulatory analysis
- Generic Environmental Document
- Regulatory guides
- Standard review plans
- Safety evaluation reports on industry technical reports
- Reviews of preapplication materials from lead plants and review of applications
- Regulatory position and participation in codes and standards development related to extended life

These efforts are integrally related and will be closely coordinated.

ORGANIZATIONAL RESPONSIBILITY

Office of Nuclear Regulatory Research

Overall coordination of the rulemaking is the responsibility of the Director, Division of Safety Issue Resolution who will meet as required with Senior Managers in RES and NRR to resolve program issues which may effect schedule or technical quality of work and to address important policy issues which might arise.

The Division of Safety Issue Resolution (DSIR) is responsible for task management for development of the rule, statement of considerations, regulatory analysis, environmental assessment, GED, and rulemaking package for changes to Part 51. Staff will support the Director, DSIR in coordination of other activities to assure consistency of technical and policy positions and that the schedule is maintained.

The Division of Engineering (DE) is responsible for supporting the development of the technical requirements in the license renewal rule and for task management and most of the technical effort on developing regulatory guide(s). DE will provide support for technical evaluation of industry technical reports and technical support to the lead plant reviews and the development of standard review plans. DE will participate in, and coordinate NRC activity with the national technical societies related to aging and plant life extension standards development.

The Division of System Research (DSR) will provide expertise in the use of PRA and risk assessment methodologies as applicable to requirements incorporated in the rule, the regulatory analysis and regulatory guides. DSR will also provide expertise on severe accident issues especially with regard to treatment within the GED.

The Division of Regulatory Applications (DRA) will provide expertise and contract support for cost analyses in the regulatory analysis and economic and socioeconomic expertise in guiding the development and review of the GED.

Office of Nuclear Reactor Regulation

NRR will provide technical support and consultation in the refinement of the rule and the regulatory analysis, in scoping and reviewing regulatory guides, in developing regulatory positions on industry technical reports and scoping and reviewing the GED. NRR will participate, as necessary, in code and standards development. NRR is responsible for developing safety evaluation reports on the industry technical reports, developing standard review plans, and for all interaction with and actions on the lead plants. NRR will assure appropriate opportunities for the RES staff to review materials submitted by the lead plants and participate in technical meetings.

Office of the General Counsel

OGC will closely monitor all license renewal rulemaking activities, participate in appropriate technical and policy meetings, and review written material for legal considerations. Upon request or when OGC deems it appropriate, OGC positions will be provided to the staff in writing.

Contractors

Contractor support, where appropriate, is being used. Contractor efforts will be integrated into the master work plan and coordinated to minimize duplication of effort and assure consistency across the work products.

<u>SCHEDULE</u>	<u>DATES FROM SECY-89-275</u>	<u>CURRENT DATES</u>		
		<u>RULE</u>	<u>R.G./SRP</u>	<u>PART 51 AND GED</u>
- Assignment of issues identified by the Technical Team, including identification of key Regulatory Guides	08/28/89	Complete	Complete	---
- Response to SRM M890622A to Commission	08/31/89	Complete	---	---
- Information paper on workshop and content of rule to EDO	09/11/89	Complete	---	---
- Information paper to Commission	09/22/89	Complete	---	---
- Status reports on technical issues and scope of Regulatory Guides	09/27/89	Complete	Complete	---
- Meeting notice and notice of intent published in FR	10/13/89	---	---	06/29/90
- Workshop on technical and environmental issues	11/15-16/89	Complete	---	07/25/90
- Draft proposed rule and plan for modifying Regulatory Analysis	12/08/89	Complete	---	---
- Close of comment period on scope of GED	01/08/90	---	---	09/27/90
- Draft analysis of and proposed response to comments	02/09/90	---	---	11/16/90
- Draft annotated outline of RG and proposed scope of GED	02/16/90	---	Complete	11/28/90
- Draft GED submitted for staff review	07/13/90	---	---	02/08/91
- Proposed rule package submitted for office level concurrence	02/19/90	02/08/90	---	---
- Proposed rule package to ACRS/CRGR	03/05/90	03/08/90	---	---

<u>SCHEDULE</u>	<u>DATES FROM SECY-89-275</u>	<u>CURRENT DATES</u>		
		<u>RULE</u>	<u>R.G./SRP</u>	<u>PART 51 AND GED</u>
- Annotated detailed outline for GED	03/16/90	---	---	04/06/90
- Proposed rule package to EDO	04/13/90	04/30/90	---	---
- Proposed rule package to Commission	04/30/90	05/14/90	---	---
- Proposed rule package published	05/30/90	06/29/90	---	---
- RG and SRP on format and content and SRPs for staff review	06/15/90	---	same	---
- RG and GED SRPs, submitted for office level concurrence	08/24/90	---	07/24/90	03/01/91
- RG and SRP to ACRS/CRGR	09/03/90	---	same	---
- RG, SRPs and GED to EDO	10/19/90	---	same	04/01/91
- RG, SRPs, and GED to Commission	11/02/90	---	same	04/15/91
- Publish draft RG, SRPs and draft GED for comment	12/14/90	---	same	05/24/91
- Comment period ends	02/21/91	09/27/90	03/12/91	08/22/91
- Draft responses to comments completed	07/26/91	11/15/90	same	11/01/91
- Final rule, final RG and SRP on format and content, Reg. Analysis, final GED, and statement of considerations for staff review	09/02/91	12/15/90	08/26/91	11/15/91
- Final rule package submitted for office level concurrence	10/04/91	01/16/91	09/91	12/02/91
- Final rule package to ACRS/CRGR	11/01/91	02/07/91	11/91	01/13/92

<u>SCHEDULE</u>	<u>DATES FROM SECY-89-275</u>	<u>CURRENT DATES</u>		<u>PART 51 AND GED</u>
		<u>RULE</u>	<u>R.G./SRP</u>	
- Final rule package to EDO	01/06/92	04/01/91	01/92	02/14/92
- Final rule package to Commission	02/03/92	04/15/91	02/92	02/28/92
- Final rule package published	04/04/92	05/31/91	04/92	04/18/92
- Develop and publish remainder of necessary RGs and SRPs, if any	04/91-04/93	---	---	---

TABLE 1
Resource Requirements for
License Renewal Rulemaking and Related Activities

	FY1990	FY1991	FY1992
<u>Office of Nuclear Regulatory Research</u>			
- Rule, Statement of Considerations, Regulatory Analysis -			
- FTE	3.4	2.4	1.0
\$K	1,420	1,350	550
- Regulatory Guides, Standard Review Plans, Codes and Standards -			
FTE	5.6	5.1	3.7
\$K	1,425	1,275	1,125
- GED and Part 51 Rulemaking -			
FTE	1.2	1.0	1.0
\$K	1,500	500	500
- Industry Technical Reports -			
FTE	4.6	5.1	1.7
\$K	300	515	150
- Lead Plants -			
FTE	0.2	0.5	0.5
\$K	75	75	75
- TOTAL -			
FTE	15.0	14.1	7.9
\$K	4,520	3,715	2,400
<u>Office of Nuclear Reactor Regulation</u>			
- Rule, Statement of Considerations, Regulatory Analysis -			
FTE	1.5	3.0	0
- GED -			
FTE	1.0	1.5	1.2
- Regulatory Guides and Standard Review Plans -			
FTE	1.5	4.5	1.0
- Industry Technical Reports -			
FTE	3.2	6.2	1.3
- Lead Plants -			
FTE	1.0	5.0	9.0
\$K	0	1283	1413
- TOTAL -			
FTE	8.2	20.2	12.5
\$K	0	1283	1413

TABLE 2
SUMMARY OF RESOURCE REQUIREMENT

	FY 1990	FY 1991	FY 1992
- TOTAL FTE -			
RES	15.0	14.1	7.9
NRR	8.2	20.2	12.5
TOTAL	<u>23.2</u>	<u>34.3</u>	<u>20.4</u>
- TOTAL PROGRAM SUPPORT FUND (\$K) -			
RES	4,520	3,715	2,400
NRR	0	1,283	1,413
TOTAL	<u>4,520</u>	<u>4,998</u>	<u>3,813</u>