

NUCLEAR REGULATORY COMMISSION

ORIGINAL

COMMISSION MEETING

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In the Matter of: DISCUSSION AND VOTE ON FIRE PROTECTION  
PROGRAM

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DATE: October 21, 1980 PAGES: 1 - 55

AT: Washington, D. C.

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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Discussion and Vote on Fire Protection  
Program

(Continued from Oct. 16, 1980)

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Room 1130,  
1717 H Street, Northwest  
Washington, D.C.

Tuesday, October 21, 1980

The Commissioners met at 2:03 p.m., pursuant to  
notice.

PRESENT:

- JOHN AHEARNE, Chairman.
- PETER BRADFORD, Commissioner.
- VICTOR GILINSKY, Commissioner.

PRESENT FOR THE NRC STAFF:

- EDSON CASE
- HOWARD SHAPAR
- RICHARD VOLLMER

1 WILLIAM DIRCKS

2 WILLIAM HANRAHAN

3 MARTY MALSCH.

4 ALSO PRESENT:

5 LEONARD BICKWIT,  
Office of the General Counsel.

6 SAMUEL J. CHILK,  
7 Secretary to the Commission.

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POOR ORIGINAL

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P R O C E E D I N G S

1  
2 CHAIRMAN AHEARNE: We meet again on our continuing  
3 trip through the fire protection -- I'm trying to grope for the  
4 right word. I'm not sure-- "swamp" is probably right.

5 What I would like to do is at least if I can't  
6 capture a momentary snapshot of what are all of the variations  
7 that we have before us, to see what is the latest version, and  
8 from whom. At that stage we might have an approximate grasp of  
9 what it is that we're addressing. Then I'm sure several of us --  
10 at least I know I do -- have a few additional questions for the  
11 Staff.

12 Commissioner Hendrie has asked that we not act on  
13 the specific rule today until he gets back, but I do have to  
14 get clear what is the deadline that we're facing, and what  
15 actions would have to be taken prior to that deadline arriving,  
16 and if we don't.

17 So, William, you are here once again with your -- all  
18 your cohorts.

19 MR. DIRCKS: My happy band.

20 I think the second point is one sure point; namely,  
21 we will not obviously get any decision on a fire protection rule  
22 today, and I had asked Ed to be prepared to discuss the proposals  
23 we had in the absence of a fire protection rule. I don't know  
24 whether you want to cover that now, or you want to try to step  
25 back from the thicket again.

1 CHAIRMAN AHEARNE: I'd like to first just see if --  
2 my count is we had the September 30th 438a, and the latest versions  
3 that I have are an October 21st memo from NRR, signed through  
4 you, Bill, on fire protection, and then an October 20th fire  
5 protection rule from the General Counsel. Are those the latest?

6 MR. CASE: I don't have a date on the one that I --  
7 October 20th, is that yesterday?

8 COMMISSIONER BRADFORD: Yes.

9 MR. CASE: Mine wasn't dated. It's the one I sent  
10 up yesterday.

11 CHAIRMAN AHEARNE: Fine. So those are the latest?

12 MR. CASE: Yes.

13 COMMISSIONER GILINSKY: What are we shooting for as a  
14 date for the signing on the rule?

15 CHAIRMAN AHEARNE: Well, Joe had asked that we  
16 would defer until he gets back, so that would make it probably  
17 either Tuesday or Wednesday of next week, and I have at least  
18 three options that I would like at least some words to get in for  
19 it, and whether or not I could get agreement, I don't know. But  
20 we are to --

21 COMMISSIONER GILINSKY: To be discussed today, or to  
22 be developed?

23 CHAIRMAN AHEARNE: To be discussed today, and then if  
24 -- at least it's clear what the option is, then for Ed to give us  
25 words, give me words. What I'm aiming at, as soon as Joe gets

1 back, to make a final decision on that. That is, unless the  
2 changes keep falling through.

3 MR. CASE: I can at least say for my part I don't  
4 plan any more changes based on what I know today.

5 (Laughter.)

6 CHAIRMAN AHEARNE: Well, I know you can't say any  
7 more than that.

8 I'm just laughing because I'm not sure whether the  
9 changes that you thought of belong in the process; if they had,  
10 then I'll ask you why they weren't in in September 30th.

11 MR. DIRCKS: Having said that, Ed, I guess there is  
12 a --

13 MR. CASE: Yes, I'd like to say some things about  
14 the Staff's views on the rule.

15 CHAIRMAN AHEARNE: Fine.

16 MR. CASE: Because I think there may have been some  
17 misunderstanding or misconception created from some of the earlier  
18 discussions. And as a matter of fact, I have several statements  
19 that I would like to read and state with assurance that I have  
20 complete agreement from all affected members of the Staff on  
21 these statements.

22 Number one: Staff management and all Staff members  
23 involved strongly recommend Appendix R as modified by my memo  
24 of October 21st. We strongly recommend that be approved and  
25 issued as soon as possible, and all of us agree with that.

1 The second point --

2 CHAIRMAN AHEARNE: In other words, what you're saying  
3 there is that all -- and I guess the key word might be  
4 "affected" Staff members -- agree that you should go at least  
5 that far?

6 MR. CASE: Yes.

7 The second point: The Staff management and all  
8 Staff members involved do not object to backfit of all operating  
9 plants licensed before January 1, '79 of the following Appendix R  
10 requirements:

11 Those dealing with fire protection of redundant  
12 trains, including the separation criteria, barriers, and associated  
13 circuits involved in those trains, all covered in Section 3(g).

14 I recognize that my October 21 revision included  
15 associated circuits associated with the safe shutdown systems in  
16 that Section 3(g).

17 We also do not object to backfit on all operating  
18 plants of the emergency lighting provisions of Appendix J, that  
19 is 3(j). And the oil collection system requirements of Appendix --  
20 if I said J, I meant R -- that is Section 3(o).

21 Now I think I ought to explain the oil collection  
22 system, why that is not on the list that is considered included  
23 in the Staff paper on ones that we had not made up our minds on.

24 CHAIRMAN AHEARNE: Well, before you get to that,  
25 let me -- since you have described it somewhat differently, in

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1 the Staff paper you had three items.

2 MR. CASE: Yes, sir.

3 Now those three items were the previous version of  
4 3(g) --

5 CHAIRMAN AHEARNE: But are those three items in the  
6 Staff paper, the three items you have just mentioned?

7 MR. CASE: No, sir. No, they are not.

8 CHAIRMAN AHEARNE: What is the correlation?

9 MR. CASE: The three items in the Staff paper are --  
10 I don't know quite how it's called in there -- the separation  
11 criteria.

12 CHAIRMAN AHEARNE: First is the fire-retardant  
13 coatings.

14 MR. CASE: Coatings. All right. The second is  
15 emergency lighting, and the third is associated circuits.

16 In the revision of Section 3(g) that I sent you on  
17 the 21st, the associated circuit issue is included in Section 3(g)  
18 which is the coating issue. So I had combined those two in a  
19 single section and that section is the revised Section 3(g).

20 CHAIRMAN AHEARNE: Well, you mean --

21 COMMISSIONER GILINSKY: Let me ask it differently:  
22 Does it cover the three --

23 MR. CASE: It covers, therefore, two of the three.

24 COMMISSIONER GILINSKY: Which two?

25 MR. CASE: Emergency -- well, we still agree with

1 emergency lighting.

2 CHAIRMAN AHEARNE: Okay, you're saying that the  
3 fire-retardant coatings as a barrier issue is now included in  
4 this which is proposed?

5 MR. CASE: Yes. It's included in 3(g).

6 CHAIRMAN AHEARNE: And although not included, you are  
7 not objecting to backfitting of emergency lighting systems?

8 MR. CASE: That's correct. I'm also not objecting  
9 to the backfitting of 3(g) which includes the coating and the  
10 associated circuits.

11 The third one we would not object to backfitting  
12 on is a new item and is not discussed in that section of the  
13 Staff paper. It is the oil collection system, and the reason  
14 that the Staff did not recommend in the Staff paper that it be  
15 considered for backfitting is because we were going to backfit it  
16 by another means; namely we were going to have the Office of  
17 Inspection & Enforcement look at each plant to see whether the  
18 things that had been done to protect against oil fires were adequate  
19 in accordance with the criteria given in Appendix R; if not, let  
20 us know and we would backfit it through another route.

21 But to make it technically clear, we do not object  
22 to that backfitting, should the Commission decide that, to do it  
23 directly.

24 CHAIRMAN AHEARNE: What has led you to change the  
25 approach that you had thought of taking?

1 MR. CASE: Well, it's not a change in approach. It's  
2 just backfitting, either way it's done.

3 CHAIRMAN AHEARNE: Well, I can understand the issues  
4 of you do not object to these others, because you had raised  
5 them as potential for backfit when we discussed about it. You  
6 have not raised one which at least I was unaware of, and saying  
7 you don't object to us doing something --

8 MR. CASE: Which we were going to do, anyway.

9 COMMISSIONER GILINSKY: I don't object to this means  
10 of imposing the requirement.

11 MR. CASE: But it's neater.

12 COMMISSIONER GILINSKY: I suppose the "do not object"  
13 is an umbrella that covers a variety of conditions. We'd better  
14 not inquire into it, otherwise it will all come apart.

15 (Laughter.)

16 MR. CASE: That's a fair observation. I don't  
17 consider it to be a -- I consider it to be a fact.

18 CHAIRMAN AHEARNE: That we shouldn't?

19 MR. CASE: No. No. These words were carefully  
20 chosen so that everybody would agree with them.

21 CHAIRMAN AHEARNE: Still on the oil issue, how did  
22 it arise?

23 MR. CASE: Well, because I was prepared to list  
24 for the Commission's benefit those things that we didn't object  
25 to backfitting of, and I have to say, in all honesty, we don't

1 object to backfitting on the oil collection system, because we  
2 are going to do it by another means.

3 CHAIRMAN AHEARNE: Then why don't you recommend  
4 backfitting it, if you were going to backfit it?

5 MR. CASE: Because I didn't ask the Staff that  
6 question, so I don't know what their individual response would  
7 be. I assume it would be 100 percent "we recommend backfitting,"  
8 but I haven't asked the question.

9 CHAIRMAN AHEARNE: All right.

10 MR. CASE: Now I'd like to say a few words more about  
11 that second statement, about the "do not object" statement. If  
12 the Commission decides to backfit any one of those three or, in  
13 fact, any of the other provisions of Appendix R, the statement  
14 of consideration will have to be changed that we have proposed.

15 In particular, if the Commission decides to backfit  
16 the fire barrier coating section, I would propose and would like  
17 to put into the statement of considerations a statement along  
18 the following lines. I don't have the detailed words. I  
19 would like it to say that the Commission recognizes that back-  
20 fitting of this requirement would require changes in a number  
21 of the operating plants previously reviewed and approved by the  
22 Staff.

23 Those Staff reviews and approvals were given on the  
24 basis that the features provided resulted in equivalent protec-  
25 tion. Where licensees continue to believe that those alternative

1 features provide equivalent protection, they should request an  
2 exemption to the regulations in this regard.

3 CHAIRMAN AHEARNE: Providing their rationale?

4 MR. CASE: Providing their rationale.

5 Now I would like that in the statement of considera-  
6 tions for at least two reasons:

7 One, without it, I think it creates an undue inference  
8 that previous Staff reviews were all inadequate.

9 Secondly, I would not want licensees not to propose  
10 exemptions if they thought their way of doing it was a better  
11 safety solution, and I don't want them to feel constrained not to  
12 request an exemption.

13 CHAIRMAN AHEARNE: Since you've -- what is the  
14 process of requesting an exemption? What actual process is  
15 followed? Do they come in with their --

16 MR. CASE: They come in with a specific request  
17 for a specific exemption, and give their reasons. The Staff  
18 reviews that under Section 50.12, I believe, and make two findings,  
19 basically: Is it safe and consistent with the law.

20 MR. SHAPAR: Three findings. One, not contrary to  
21 law or authorized by law, will not endanger life or property;  
22 and otherwise in the public inte. t.

23 MR. CASE: And there must be a specific piece of  
24 paper that reaches those conclusions, backed up by a Staff  
25 evaluation that provides the justification for it.

1 CHAIRMAN AHEARNE: And then the Director of NRR  
2 issues an exemption?

3 MR. CASE: The Director of NRR is authorized by the  
4 Commission to grant such exemptions.

5 Now it is Staff practice, as you know, for any  
6 exemptions to at least call Commissioners' assistants and explain  
7 to them what the underlying problem is, why we think it's all  
8 right, and to see if there are any Commission objections before  
9 the Director signs any such exemption.

10 CHAIRMAN AHEARNE: Now you are proposing then a  
11 certain amount of flexibility be imbedded into the backfit;  
12 correct?

13 MR. CASE: Yes, but no more flexibility than is  
14 normally available in requesting exemptions; but just to remove  
15 any possible inference that that flexibility is not there.

16 COMMISSIONER GILINSKY: You could always request  
17 an exemption.

18 MR. CASE: Yes.

19 COMMISSIONER GILINSKY: It's just making it explicit.

20 MR. CASE: Yes.

21 COMMISSIONER GILINSKY: In this particular --

22 MR. CASE: Right. For two reasons. I've got a  
23 couple more to go over.

24 COMMISSIONER GILINSKY: I wonder if I could just ask  
25 you about the earlier part. Does this proposal then gather in

1 the points, the three points that we were talking about?

2 MR. CASE: Yes.

3 COMMISSIONER GILINSKY: Last time?

4 MR. CASE: Yes.

5 Another statement is the following:

6 Staff management and all Staff members involved  
7 recommend against backfit to all operating plants of the  
8 remaining Appendix R requirements, other than those three -- four,  
9 if you want to count them that way.

10 The reason is that we believe that the benefit from  
11 that would be exceeded by the costs of so doing, because the  
12 changes between the Appendix R requirements and the branch  
13 technical position requirements are so small that the effort  
14 involved is not worth the cost.

15 Fourth, the Staff management and all Staff members  
16 involved agree with and plan to use Appendix R requirements and  
17 the remaining branch technical position requirements for all  
18 OLs issued after 1/1/79 and for all new OL and CP reviews as a  
19 part of the standard review plan, immediately upon Commission  
20 approval of Appendix R.

21 Four, those plants reviewed this way which require  
22 changes in design or procedure, we would follow the implementa-  
23 tion schedule approved by the Commission in approving Appendix R.

24 CHAIRMAN AHEARNE: Now what you're saying is you  
25 would use it, but you stopped short of saying that it ought to be

1 incorporated in the rule?

2 MR. CASE: Yes, I have, and the reason for that is  
3 we think we can do better in developing a rule for future plants,  
4 when we spend some more time on the subject. We don't think it's  
5 necessary because we can use Appendix R as a standard review  
6 plan. It provides adequate coverage for licensees for our  
7 new procedure; if we ever get there, we'll be required to justify  
8 deviations from the standard review plan.

9 CHAIRMAN AHEARNE: Let me ask how you would answer  
10 the question. You said that the reason you don't want to imbed  
11 it into the rule is you think you can do better with future  
12 plants. Well, why should you not imbed it in the rule now and  
13 then when you come up with a better approach, modify it, given  
14 how long it took to get here?

15 MR. CASE: Because I think I have all the advantages  
16 of that by using it as a standard review plan and avoid the  
17 disadvantages which is numerous exemptions that have to be dealt  
18 with.

19 CHAIRMAN AHEARNE: Why should there be numerous  
20 exemptions for future plants?

21 MR. CASE: Well, because there are -- we know that  
22 alternatives to the specific requirements of Appendix R are  
23 acceptable, and we would expect the licensee to propose them.  
24 Now I must say a more thing about the developing a rule for  
25 future plants:

1 I would expect that such a rule could not be developed  
2 without a lot of Staff participation and NRR Staff participation.  
3 The Staff is going to be fully occupied for the next two or  
4 three years in implementing Appendix R and for that reason we  
5 don't have Staff available to put on the job.

6 CHAIRMAN AHEARNE: Okay, but, now, Ed, what I think  
7 you have said is that Appendix R as it stands, you know that  
8 there are other ways of meeting the requirements, and so if you  
9 put it on future plants, there would have to be exemptions.

10 MR. CASE: Yes.

11 CHAIRMAN AHEARNE: But as I read this, there are no  
12 exemptions, at least to the section that you sent out, there  
13 are no exemptions imbedded in that.

14 MR. CASE: That's correct. There will be a lot of  
15 exemption requests if this is backfit to all operating plants.

16 CHAIRMAN AHEARNE: Okay. Now if you put in a  
17 flexible statement in here for backwards, could you then apply  
18 and then make this a rule for the future also until such time,  
19 three, four years downstream, that you got this better fire  
20 protection rule, and then you would have a fire protection rule?

21 MR. CASE: Well, whether you put the flexibility in  
22 the rule itself or take advantage of the exemption or reasons  
23 to get it, in each case there has to be a Staff review and  
24 acceptance thereof.

25 In my opinion, in this case, I think it is better to

1 require exemptions for two reasons:

2 One, to assure that there is consistency applied  
3 in accepting alternatives to that set forth in the rule; and  
4 secondly, to provide a better document basis as to exactly what  
5 the situation is in these individual plants.

6 CHAIRMAN AHEARNE: Well, wouldn't those words  
7 apply just as well to the future?

8 MR. CASE: Yes, and I could take administrative  
9 means to achieve the same ends that I realize by going the  
10 exemption route. But there is a fine line between the two, but  
11 as I look at the situation here -- this is me personally  
12 speaking, I'm not the Staff members -- I believe it would be  
13 better in this situation to do it by exemption.

14 I don't have as good an answer to your questions  
15 as to why not use Appendix R for future plants right now. I can  
16 only tell you that there is strong opposition from the Staff from  
17 doing this. The basic reason seems to be that there are too many  
18 details in here, it would discourage people from trying to seek  
19 better alternatives, and in total they consider it to be a  
20 chilling effect rather than encouraging innovation, and so in  
21 their view they do not think the rule is appropriate for future  
22 plants.

23 I can only hope that after we have spent some time  
24 at it, we could develop a rule that they would agree was  
25 appropriate for future plants, but my view right now is that

1 I think it's fair to say most of them do not agree with this  
2 rule for future plants.

3 CHAIRMAN AHEARNE: Sounds like opponents of  
4 standardization there.

5 MR. CASE: I think there's a mite of that involved,  
6 Mr. Chairman, that I do not personally agree with. But I'm  
7 just not familiar enough with the subject to overrule at this  
8 point in time.

9 MR. SHAPAR: I might point out that without the  
10 rule, of course, the issues are litigable in each case, and  
11 they eventually reach the Commission in an adjudicatory context.

12 CHAIRMAN AHEARNE: One of the points, Ed -- you said  
13 you had a list of points?

14 MR. CASE: Those are my list.

15 CHAIRMAN AHEARNE: Okay. Before I -- we still do  
16 have to get back to the earlier one, but as far as this, let  
17 me ask a few questions, and then my colleagues may have some.

18 On your approach that you have provided on pages 46  
19 and 47 changes, this is your October 20th, what would you see  
20 as happening if the separation is 19-1/2 feet?

21 MR. CASE: I would expect that the licensee would  
22 ask for an exemption, and most likely the Staff would grant  
23 the exemption, or it would recommend that it be granted. Inside  
24 containment, in particular areas, as I understand their views,  
25 there may be situations in which they would not recommend.

1 CHAIRMAN AHEARNE: 19 feet, 11-3/4 inches?

2 MR. CASE: I think in most cases, I daresay in all  
3 cases, we would grant an exemption.

4 CHAIRMAN AHEARNE: All right. Now can you explain to  
5 me why, since you have then seen the potential for exemption need  
6 here, you haven't proposed some flexible language, as you just  
7 did with respect to the backfit?

8 MR. CASE: Well, I think the flexibility is there unde  
9 the standard exemption provisions for Commission review.

10 CHAIRMAN AHEARNE: It is also --

11 MR. CASE: I don't understand.

12 CHAIRMAN AHEARNE: On the backfit case, you pointed  
13 that out if we go that route, then we would want to imbed  
14 explicitly --

15 MR. CASE: No, no, I just say in the statement of  
16 considerations that people, if they think it's justified, should  
17 ask for exemptions. I wouldn't provide any different means.

18 CHAIRMAN AHEARNE: But would you then ha - in the  
19 statement of considerations that covering just those three back-  
20 fit?

21 MR. CASE: I think I would, without being that  
22 specific, limit it -- try to limit it to only Section 3(g).

23 CHAIRMAN AHEARNE: 3(g) in its entirety?

24 MR. CASE: Yes.

25 CHAIRMAN AHEARNE: So that would then pick up this

1 particular point?

2 MR. CASE: Yes.

3 CHAIRMAN AHEARNE: Okay. Victor?

4 COMMISSIONER GILINSKY: I don't have any questions  
5 on this point.

6 CHAIRMAN AHEARNE: Peter?

7 COMMISSIONER BRADFORD: Ed, what do you see as  
8 being the interplay between requests for exemptions and the  
9 meeting of the deadlines ultimately? Does the request for  
10 exemption just in effect stay the deadline?

11 MR. CASE: Well, I've thought about that, without  
12 asking a lawyer, and I guess my answer is yes.

13 MR. BICKWIT: My answer would be no.

14 MR. SHAPAR: My answer would be no, too.

15 (Laughter.)

16 MR. CASE: It would appear to me that the licensee  
17 would come to the Staff and say instead of doing it that way, as  
18 the rule requires, I request an exemption, and unless and until  
19 the Staff acted on it, if it were physically impossible, I think  
20 they'd have a fair argument that although theoretically,  
21 technically, one ought to comply with the deadline as a practical  
22 matter.

23 CHAIRMAN AHEARNE: But let me jump in. It seems to  
24 me that there is an obvious option the licensee has in that  
25 case: It's comply or shut down.

1 MR. SHAPAR: He can ask to send his request in long  
2 in advance and get it acted on. He can send it in at the last  
3 minute and there's no time for the Staff to act. In either case,  
4 there's no stay.

5 MR. BICKWIT: But your point, as a practical matter --

6 MR. CASE: As a practical matter --

7 MR. BICKWIT: -- the Commission doesn't have to shut  
8 him down, even if he's in violation of the regulation, which  
9 he would be.

10 MR. SHAPAR: It comes to a matter of prosecutorial  
11 discretion, if the guy's in violation.

12 MR. CASE: Yes, that's probably true, too.

13 COMMISSIONER BRADFORD: What kind of actual Staff  
14 capability do you have if all of the plants which had had the  
15 earlier Staff reviews and approvals in fact requested exemptions,  
16 covering those areas that had been previously approved? How long  
17 would it take you to process those?

18 MR. CASE: Well, I don't have an answer to that  
19 question, because I don't really know how to --

20 MR. BICKWIT: Are you talking about the closed items?

21 MR. CASE: Yes.

22 MR. BICKWIT: Well, there you don't get out of them  
23 simply by requesting an exemption. Unless the rule is modified,  
24 you have to come in and apply for an amendment.

25 COMMISSIONER BRADFORD: Well, we're talking about

1 two different things.

2 CHAIRMAN AHEARNE: Which -- I thought --

3 MR. BICKWIT: If they're closed, they're closed.

4 MR. CASE: But if the Commission backfits Appendix R,  
5 it will reopen them.

6 MR. BICKWIT: No. Well, unless you provide for that.  
7 I hadn't heard that said.

8 CHAIRMAN AHEARNE: You mean backfit those three?

9 MR. BICKWIT: If you explicitly provide for that,  
10 fair enough. We are saying we recommend that you do that.

11 MR. CASE: And those are the ones you're adding now?

12 MR. BICKWIT: Yes.

13 MR. CASE: The only answer I can give to that  
14 general subject area is we would plan to give priority to those  
15 plants in which there had not been a completed Staff review,  
16 that is the Appendix R plants, give those first priority, because  
17 they don't have any agreed-on fire protection features in that  
18 area, while the ones that you are backfitting, they have some-  
19 thing, and the question is how close does it comply with the new  
20 Appendix R requirements. So I'd give priority to the first  
21 group.

22 CHAIRMAN AHEARNE: But there would be nothing in  
23 the rule that would -- if I put those two last conversations  
24 together, if they have to backfit, they've already gotten some  
25 kind of approval, and they come in and ask for an exemption, you

1 said you'll give priority to those that don't have anything yet.

2 MR. CASE: Yes.

3 CHAIRMAN AHEARNE: So that the ones, if they already  
4 have something approved, then they end up at the end of queue and  
5 almost automatically then will go into violation.

6 MR. CASE: That's why I said as a practical matter  
7 it will affect their schedule of compliance. I don't see how  
8 the answer can be anything else but that.

9 CHAIRMAN AHEARNE: I was just wondering, it seemed  
10 to me that it sort of puts them in the unique situation that  
11 if in the past they did something, then they get pushed down in  
12 the queue and have a harder time getting it addressed. If  
13 they didn't do anything in the past and fought us all the way,  
14 then they can get our attention.

15 MR. CASE: That's why I think I used prosecu--  
16 discretion, when we recognized that fact, that we were putting  
17 them at risk, and it was the other fellows that really ought to  
18 be implementing quickest and deal with them first.

19 But I should modify that answer by saying even if  
20 the previously proposed version of 3(g) were used, it has that  
21 same problem, because built into that was the equivalence clause  
22 that has to be reviewed by the Staff.

23 So, in either case, the Staff would get on the  
24 critical path. It's just you have a Hobson's choice,  
25 unfortunately.

1 COMMISSIONER BRADFORD: One of the two reasons you  
2 suggested for making the exemptions language explicit in the  
3 statement of considerations was in effect to say that we weren't  
4 completely discarding the fact that these plants had been reviewed  
5 previously.

6 Why wouldn't it make more sense to in effect turn  
7 the language around? I agree that's a problem and something  
8 probably should be said about it, but rather than sort of say it  
9 by indirection, that is saying please come in and request  
10 exemptions, just say that we recognize there have been previous  
11 Staff reviews and are concerned that those haven't in all cases  
12 assured the level of safety that we now think is necessary.

13 MR. CASE: I was only thinking about thoughts  
14 rather than words, so if the thought is conveyed that everything  
15 out there is (a) not a piece of rubble from a safety standpoint,  
16 and that the Staff that reviewed them was not completely  
17 incompetent, that will take care of the problem. However --

18 (Laughter.)

19 And the Staff feels very strongly on that.

20 COMMISSIONER BRADFORD: I see the point. I see the  
21 point.

22 What is the second -- what was the second reason  
23 again? I'm sorry.

24 MR. CASE: The second reason? I got so involved here  
25 I forget what the second reason was.

1 COMMISSIONER BRADFORD: I should have made a note.

2 I'm sorry.

3 MR. CASE: Oh. To make sure that licensees are not --

4 COMMISSIONER BRADFORD: Didn't simply feel that it  
5 was frozen?

6 MR. CASE: Yes, and they do something foolish from a  
7 safety standpoint just because they don't want to get on somebody's  
8 list by asking for an exemption, including yours, sir.

9 COMMISSIONER BRADFORD: I understand. But is there  
10 any stronger reason for feeling that licensees would behave  
11 that way in this situation than there is with regard to the rest  
12 of the rule or with regard to any rule that we promulgate?

13 MR. CASE: Well, the people whom I've been talking  
14 to recently are trying to convince me that fire protection is  
15 unique in this respect. I don't know that I agree with them,  
16 but they believe that fire protection is particularly unamenable  
17 to specific requirements as compared to everything else on a  
18 nuclear power plant.

19 CHAIRMAN AHEARNE: I find that hard to believe.

20 MR. CASE: I find that hard to believe, but they feel  
21 strongly about this. But I really don't think the licensees  
22 doing something foolish is any more appropriate here than any  
23 other case, frankly. I think the first point is the more  
24 important of the two.

25 CHAIRMAN AHEARNE: I guess what I would like for the

1 next couple of days, the language that you would see fit to use,  
2 first on backfitting, so that there would be something explicit  
3 that would say that those three or four items would be backfit.  
4 The language that you would propose for the changing statement  
5 of considerations.

6 I would like proposed language that would make  
7 Appendix R also as part of the rule for the plants after January  
8 1st, 1979.

9 MR. CASE: When I talked about that, did I make it  
10 clear that -- perhaps I didn't. I can't remember. There have  
11 been three or four plants, new OLS approved since January '79,  
12 and the Staff would propose to go back to them and measure them  
13 against Appendix R. Did I say that?

14 CHAIRMAN AHEARNE: You said it the last time. That's  
15 fine. But I would like the language to make this also then  
16 applicable -- in other words, Appendix R would be applicable  
17 for any plant.

18 MR. CASE: Any operating plant, or any plant?

19 CHAIRMAN AHEARNE: In other words, we now have the  
20 rule it's January 1st, '79 backwards. I'd like the additional  
21 language --

22 MR. SHAPAR: Instead of the standard review plan.

23 MR. CASE: Instead of the standard review plan  
24 approach.

25 CHAIRMAN AHEARNE: And I guess I would like to see --

1 and I'm not sure whether it's Ed or Howard or Len -- if there  
2 is some way that it could be worded that a phrase that on the  
3 backfit, that those that have already done something, then have  
4 a longer time until the Staff beats its way through that.

5 I'm not sure of the right way to put it. And I  
6 guess I'm a little uneasy about the philosophy that seems to be  
7 imbedded somewhere that if we are trying to work with a group of  
8 licensees to get them to do something, the best strategy for the  
9 licensee is to resist all the way, because when we finally give  
10 up in frustration and put out a rule or an order, then those  
11 that fought us all the way have the least difficult task of  
12 accommodating us; whereas those that originally agreed with what  
13 we wanted to do then had the worst. That just bothers me on  
14 the strategy.

15 MR. CASE: I understand the problem. I don't know  
16 quite how to deal with it.

17 CHAIRMAN AHEARNE: And in order for us to -- at  
18 least in order for me to try to convince my colleagues of  
19 these approaches for meeting next Tuesday, I would like to have  
20 it by the end of this week, so that at least they can have a  
21 chance to --

22 COMMISSIONER BRADFORD: It will be interesting.  
23 On that last point, of course, it's a problem that we have  
24 almost across the action plan now, so if you can come up with a  
25 good formulation for dealing with that --

1 CHAIRMAN AHEARNE: I don't know. It may just be  
2 an expression of c'est la vie.

3 MR. DIRCKS: Hadn't you people approved, gone out  
4 and approved what these licensees did?

5 MR. CASE: Yes.

6 MR. DIRCKS: I think it's different.

7 MR. CASE: But then if you reopen the issue, how do  
8 you give them any benefit for what they have already done? One  
9 thing that occurs is a longer implementation schedule, but  
10 that's perhaps not --

11 CHAIRMAN AHEARNE: If we end up concluding that  
12 it has to be backfit, which is sort of where I'm coming out, I  
13 have no problem with saying that they are going to eventually have  
14 to do it.

15 I have a problem with telling them you're going to  
16 have to do it, and however, since you've already done something,  
17 we aren't going to get around to looking at you, but you have  
18 your choice: Do it now or be in violation. And there's some  
19 intermediate ground that we ought to be able to work out.

20 MR. DIRCKS: Not only done something, but did it  
21 without approval.

22 MR. CASE: You may not agree with it, but it would  
23 be along the lines of the same implementation schedule given  
24 in the rule, after Staff approval or disapproval of any  
25 exemption problems.

1 CHAIRMAN AHEARNE: Somewhere, come up with that.

2 MR. CASE: It sort of encourages exemption requests,  
3 but I don't like that, but --

4 CHAIRMAN: Okay. Now perhaps you can address, given  
5 that we are not going to get to this rule until next week,  
6 November 1st is marching upon us.

7 MR. CASE: Okay. Let me talk about that for a  
8 minute.

9 The Commission wrote some words in the answer to the  
10 UCS petition, and I think they have repeated them in the statement  
11 of considerations of the proposed rule.

12 In any event, what those words said was that the  
13 Commission encouraged and believed strongly that all fire  
14 protection modifications ought to be completed by November 1 of  
15 this year.

16 It noted that the Staff had already approved the  
17 implementation of some features beyond that date, and the  
18 Commission wanted to review them on a case-by-case basis,  
19 presumably before November 1, 1980, although it didn't explicitly  
20 so state.

21 In addition to that problem, we have a number of  
22 people who have a completion date given in their license or in  
23 their tech specs which is before November 1. They have requested  
24 an extension to beyond November 1, so that adds to the burden.

25 This problem exists regardless of what the Commission

1 does on Appendix R, because the dates that you were speaking of  
2 are dates that came from closed plants to which Appendix R does  
3 not apply. They were plants where the Staff and Applicant  
4 had reached agreement as to what should be done under the branch  
5 technical position.

6 So the point I'm trying to make is the problem is  
7 there, irrespective of what you do.

8 CHAIRMAN AHEARNE: Or, in other words, there are  
9 two categories: There's ones in which exemptions are going to be  
10 requested from dates that have already been agreed to.

11 MR. CASE: Yes.

12 CHAIRMAN AHEARNE: And there's another set that would  
13 be put in place by the fire protection rule; is that correct?

14 MR. CASE: No. There is only one set, in the sense  
15 that it comes from plants where Appendix R, as presently written,  
16 would not apply. It comes from two sources: one where there  
17 was a date agreed on before November, they have asked for an  
18 extension --

19 CHAIRMAN AHEARNE: And then the rest are the  
20 November dates?

21 MR. CASE: And the rest are dates that we previously  
22 agreed before the Commission's words on dates after November 1st,  
23 which must be reexamined.

24 Now what I'd like to propose -- Darrel will get into  
25 details -- is rather than a case-by-case review and approval by

1 the Commission, which is implied if not stated in these words --  
2 I would like to propose some procedures and criteria which the  
3 Staff would use in reviewing those dates. The Staff, informing  
4 the Commission of what it has done, in accordance with those  
5 criteria, rather than the Commission getting involved in each  
6 decision. I think that's a better way to proceed.

7 But if you don't accept that way of doing business,  
8 then we can revert to the case-by-case approach, and we believe  
9 with two sessions with the Commission of approximately two hours  
10 each, go over each case. There are some 25 units now involved.  
11 But Darrel will give you the details.

12 MR. EISENHUT: I think that did it, basically.

13 CHAIRMAN AHEARNE: It helps us if we get it twice.

14 MR. EISENHUT: Yes. I hope it comes out the same.

15 Could I have a slide? Can I go to the back-up slides?

16 (Slide.)

17 Go back to the one that's marked A-1, I think. Maybe  
18 I can explain what Ed was referring to just a minute ago.

19 (Slide.)

20 This is just a simple chart. It's the first of  
21 three that I won't go through, but I handed these out last week.  
22 I just wanted to make one observation here. The top group of  
23 plants are those that were reviewed and approved strictly under  
24 Appendix A, and you'll notice that's why over on the left-hand  
25 side -- it's a little out of focus, if you could focus it back

1 there -- we sort of grouped all the items in administration, non-  
2 shutdown and shutdown items.

3 MR. CASE: And the reason for that will become clear  
4 as we go further into the discussion.

5 MR. EISENHUT: Right. And that's why I really wanted  
6 to lay the groundwork here just a little bit.

7 (Whereupon, Commissioner Gilinsky left the  
8 commission room at 2:45 p.m.)

9 MR. EISENHUT: As you go down the line -- you can't  
10 really see from the slide here, it's blurred for some reason,  
11 but you can see from the handouts -- there are items that are  
12 incomplete, Category A or Appendix A items that are in the  
13 left-hand three columns. And this continues -- you see the  
14 dividing line in the middle of the page. The plants on the  
15 bottom, beyond Trojan, from there on down, starting with  
16 Arkansas 1, are those plants that there are still items loose,  
17 hanging loose, that are unresolved, that will be resolved by  
18 Appendix R.

19 The plants above Trojan, Trojan and above, are plants  
20 that would not need to have an Appendix R review unless we make  
21 the backfitting decision.

22 CHAIRMAN AHEARNE: The double zeroes in the far  
23 right-hand column?

24 MR. EISENHUT: That's right. And the Xs are -- well,  
25 we use the nomenclature from the last one, last presentation,

1 just for convenience, are the three items, associated circuit,  
2 separation barriers, emergency lighting. An X means that it  
3 would have to be re-reviewed; namely that it was an item that was  
4 resolved under Appendix A, but by backfitting you would obviously  
5 have to re-backfit those three items.

6 This was really our internal working sheet of keeping  
7 track of the status on fire protection items on each plant. You  
8 can go down the line, and you can see there's a number of items.

9 The point is, all of the items on the left-hand  
10 side under Appendix A we'll be discussing here about schedules,  
11 even those that are down under the Appendix R reviews.

12 Now if you go down the line to the three tables that  
13 I passed out, you will find there are 25 units, 25 plants that  
14 have items under Appendix A, where the date is either a date  
15 that said originally it will be complete by November the 1st, and  
16 now they're asking for a delay on that, or the original date in  
17 the license condition, the original date we put in was already  
18 beyond November the 1st.

19 So what we have done is we have picked those off of  
20 this slide -- and now could I go back to the first slide.

21 (Slide.)

22 What this is, is this is a summary of those 25  
23 units, and what we have done is, the first column is the number  
24 of items -- this is all per Appendix A, this doesn't include  
25 the Appendix R items -- these are the number of items under

1 Appendix A that remain to be done on these plants.

2 The second column where it says original schedule,  
3 this is the license condition that is presently in the applica-  
4 tion on these 25 plants.

5 Now on some items, they have since come back in and  
6 said they needed relief on that original schedule on selected  
7 items, and then this is the number of items that they have  
8 requested relief on, and finally this is the last date that they  
9 are now asking for, the date for the last item. And you can see  
10 there is some variation on these, and there's a couple on here  
11 which I'll get back to, to talk about a little bit later --

12 MR. CASE: Why don't you pick out one plant to make  
13 sure --

14 MR. EISENHUT: All right. We have circled the plants  
15 that are going to be approaching -- one plant has October 30,  
16 the others have November 1 dates. If you look at Calvert Cliffs  
17 as the first plant that we have circled, Calvert Cliffs was a  
18 plant where we gave final NRC approval on these items or a lot of  
19 the items. The last approval we gave was early October of this  
20 year. So that means very recently we have given approval on the  
21 last items, on what needs to be done on fire protection.

22 Calvert Cliffs had, by their safety evaluation,  
23 completed 35 individual fire protection items that we identified  
24 in the SER. Five items they have not yet completed. The five  
25 items that are yet to be completed, they said, and they have

1 requested relief to go to July 1982 to complete those items.

2 Now as it turns out, on Calvert Cliffs, I'll just  
3 give you an idea of the kinds of items they are, when we are  
4 talking about this. The five items that were in a request from  
5 the utility a couple of weeks ago asking for this delay, September  
6 26th of 1980 they asked for this relief, the first item was to  
7 put halon in the cable spreading room. They estimate that will  
8 be complete by November 15th.

9 So, you see, obviously that's nowhere near the last  
10 item, which is July '82. So what it tells you is to really  
11 understand in detail all of these plants, as Ed mentioned, you  
12 really have to go back and look at each line item, and each one  
13 has a date behind it. The latest date is what's on this chart.

14 So let me just run through Calvert Cliffs. The first  
15 one was halon in the cable spreading room, they'll have installed  
16 by November 15th.

17 They will have detection equipment installed -- I  
18 don't know which room, it says four different rooms -- by  
19 November 26th, 1980.

20 The third item is fire protection sprinklers in six  
21 rooms, they'll have completed by January 31, 1981, and they  
22 said because we changed the scope where we required the design  
23 change, and therefore it takes until January 31.

24 The fourth item was halon in the switch gear room,  
25 and they again said January 31, 1981, and again because of the

1 scope changes. It's their letter I'm reading from.

2 So, four of the five items, you'll notice, will  
3 be complete by January 31.

4 The last item is the reactor coolant pump lube oil  
5 system that we talked about here as one of the backfit items.  
6 Our evaluation already assumed and was putting that in as a back-  
7 fit item, and that is the fifth item. That item is the final  
8 design, and to get it in place requires an outage to put it in.  
9 So Calvert Cliffs tied this to the next refueling outage when  
10 they can put the design in.

11 Now that's just indicative of the kind of an item  
12 or kind of a plant we're running into with this.

13 On the very next slide, this is how we would --

14 (Slide.)

15 COMMISSIONER BRADFORD: The next refueling --

16 MR. EISENHUT: It's for the second unit. I'd have  
17 to look at -- one unit is earlier than the other. The disadvantage  
18 of this slide we realized after we made it, is it's got two units  
19 on it, and it's the last unit of the two units. The refueling  
20 outage is July '82.

21 COMMISSIONER BRADFORD: It still seems a ways off.

22 MR. EISENHUT: I think they are presently in shut-  
23 down; is that right?

24 MR. WAMBACH: Yeah. The unit that is going to be  
25 affected there is shutting down for refueling outage in about a

1 month and a half, but they won't be able to get it in at that  
2 refueling outage, because we just laid the requirement on them --

3 MR. EISENHUT: Early this month. And, in fact, it's  
4 the subject that we're even talking about here as to whether to  
5 backfit or not. So we've been laying it on them. And what you  
6 find is just that kind of a situation, is you find that either  
7 the plant -- for example, one of the Indian Point plants --

8 MR. CASE: We don't bring it up to reach a judgment  
9 on it, just to show you the kind of problems we are going to face  
10 on each one, and then listen to our proposal before you --

11 MR. EISENHUT: And that's why you really have to  
12 look at it in detail, because some of these plants are presently  
13 shut down, and we just gave them the requirement on selected  
14 issues very recently.

15 The next slide --

16 (Slide).

17 -- is a summary of what we would propose doing, and  
18 how we would propose going about handling one of these.

19 CHAIRMAN AHEARNE: These particular exemptions would  
20 be ones that I guess you have said, Ed, that would be  
21 independent, would it not?

22 MR. CASE: Yes.

23 MR. EISENHUT: That's right. And it would be -- I  
24 don't think it would be any exemption. It would clearly  
25 require amendment changes to the license. It's a license

1 condition, so it would require a change in the license. The --  
2 well, I broke the items down grouped in a little bit in parallel  
3 with what's in proposed Appendix R.

4 MR. CASE: Let me interject here, because I'm not  
5 sure you're going to explain.

6 (Laughter.)

7 There is an implementation schedule, as you know,  
8 in Appendix R. It basically says for administrative items, it  
9 groups the changes into three categories: administrative, those  
10 requiring shutdown, and those not requiring shutdown.

11 For administrative requirements, it says you must  
12 implement in effect, it says, 90 days -- let me get my numbers  
13 out -- after you know by the Commission's publishing of the rule  
14 exactly what the requirements are. It's 90 days from the date  
15 of publication.

16 For non-shutdown items, the arithmetic adds up to  
17 one year after the publication in the Federal Register. That is  
18 the time the licensee knows exactly what the Commission wants.

19 For shutdown items, it is the first refueling nine  
20 months after you exactly know what the Commission wants; namely  
21 publishing in the Federal Register.

22 Those intervals were established based on our  
23 experience with implementing similar provisions in Appendix A,  
24 or based on our reviews under the branch technical position under  
25 Appendix A, and they were designed to be schedules that licensees

1 exhibit good faith and install as soon as practicable.

2 In other words, those schedules, based on the date  
3 you know what to do, are our best judgment today as quickly as  
4 it can be done for most plants, and why do I say most, other  
5 than all plants? Because it also assumed that licensees would  
6 start making preparation for these requirements at the time  
7 the rule was published as a proposed rule. They would recognize  
8 that they should start ordering pipe, or they should start  
9 ordering sprinklers or without knowing specifically how they  
10 are going to be used.

11 So my point is that those are very tight schedules,  
12 and essentially what we are going to propose is we apply those  
13 same templates, namely 90 days after you know what an administra-  
14 tive requirement is; one year after you know what a non-shutdown  
15 requirement is; and nine months after the first refueling -- to  
16 what we have previously done for the Appendix A branch technical  
17 position plants.

18 In other words, we wrote an SER on a given date. If  
19 it dealt with an administrative matter, we would apply a  
20 template that says that should not go beyond 90 days from that  
21 date, unless we look at that case hard and find some unique  
22 reasons in that particular case for granting the exemption or  
23 the extension.

24 If we find no unique reasons, we would not grant the  
25 extension, and we apply that logic to the shutdown and the

1 non-shutdown requirements.

2 Is that what you were going to say?

3 MR. EISENHUT: You read it all except for the last  
4 part. There's one other caveat.

5 What Ed is exactly right. That's what we basically  
6 are trying to say here.

7 From an administrative standpoint, the Appendix A  
8 plants are the ones who have already done everything except the  
9 things that were very difficult to do, and therefore you would  
10 not expect and we did not find any administrative items when you  
11 go back and look at them.

12 MR. CASE: Let me make one more point. They're the  
13 good guys, in your parlance, Chairman Ahearne. They have already  
14 agreed to do these things, so they should not be punished -- they  
15 should be punished less by a tight implementation schedule, than  
16 those Appendix R plants. Because those are the guys that refused  
17 to do something.

18 So, at the very least, you ought to give them the  
19 same implementation schedules you give the Appendix R plants.

20 MR. EISENHUT: Right. I was making one observation.  
21 The administrative item here is an old set for the good guy plant,  
22 so to speak.

23 MR. CASE: Because there aren't any administrative  
24 items left to implement.

25 MR. EISENHUT: From a hardware standpoint, again the

1 proposed Appendix R breaks it down into two groups: those items  
2 that require shutdown and those items that do not require shut-  
3 down, the only differentiation being also it's applying to a  
4 different procedure, or whether we require approval on the one.

5 Here the utilities all know precisely what it is  
6 that needs to be done, so here it's only one item. They know  
7 what needs to be done, we've approved what needs to be done;  
8 therefore, what we would do is we would propose first using the  
9 same template of whether it requires shutdown or no shutdown,  
10 and these two schedule dates, as Ed said.

11 Next we would look a little bit beyond that. We  
12 would say --

13 MR. CASE: If it meets that template, we wouldn't  
14 do any more work. We would say that is justified, if it was  
15 within the template.

16 Now if it exceeds the template -- in other words,  
17 there's more time than the template would permit, then you've  
18 got to look at that particular case to see if there are any  
19 unique reasons that they should be granted extra time. And  
20 that's what Darrel is about to say, I think.

21 MR. EISENHUT: Yeah, and there's one other set,  
22 subset, and that is the subset where people have already said --  
23 given us dates, intermediate dates that wouldn't show up in our  
24 license, because the last date is what shows up in the license.  
25 We would expect the utilities to go ahead and keep those dates

1 and go ahead and implement all the other subitems as soon as  
2 practicable.

3 For the example we used, it would say for both  
4 Calvert Cliffs units, they would have 39 to 40 items implemented  
5 by 1/31/1981. If that one item strings out, that's fine, but  
6 we would want to be sure that we don't give relief under the  
7 license condition such that a utility could back off of any  
8 commitment given.

9 CHAIRMAN AHEARNE: What's the one unique plant?

10 MR. EISENHUT: The one unique plant -- could I  
11 go back to the first slide.

12 (Slide.)

13 MR. CASE: There's one that we know by inspection  
14 doesn't meet the template.

15 MR. EISENHUT: In fact, there's probably a couple,  
16 but there's two that stand out: One is the San Onofre plant,  
17 two-thirds down the page. The license condition that is  
18 presently in their license says that they have to implement  
19 fire protection at the end of the SEP.

20 CHAIRMAN AHEARNE: It's not quite a good guy plant,  
21 no.

22 MR. EISENHUT: It's not, and it would be my intention  
23 to go back, and that would be one we would work on and change  
24 the license condition. That is clearly in my mind -- this is  
25 one of them that's up for negotiation. There are -- one of the

1 kind, also, Beaver Valley, where you can see a date that now  
2 the second refueling is March of '82, and Surry 2, which says  
3 refueling is now 12/81.

4 If you look at a plant like Surry, what we're saying  
5 is we will go back and look at it in some detail. The Surry unit,  
6 as you probably know, Surry 2 was shut down for 18 months. It  
7 was shut down for seismic modifications, and we would certainly  
8 want to have a very good understanding of why those items, the  
9 two or three remaining items, were not put in place during that  
10 shutdown.

11 The plant is operating today. We'd have to go back  
12 and look at the items, look at when they were approved, look at  
13 what the items are, does it require equipment and look at them  
14 in some detail.

15 MR. CASE: Let's take San Onofre, for example. I  
16 think you'd have to assume there that they weren't aware until  
17 we tell them, we tell them in the next day or so --

18 CHAIRMAN AHEARNE: It looks like they would really  
19 end up being an Appendix R?

20 MR. CASE: Yes, indeed.

21 Now we have to change these license conditions by  
22 order, unless they voluntarily agree. So we face some  
23 litigative problem using this approach. Unless somehow, to  
24 introduce Len's subject later on, it could be built into the  
25 Appendix R rule. There is a way of doing that, at least.

1 MR. EISENHUT: The only other item I was going to  
2 mention was back on the other slide. We don't have to get it.

3 (Slide.)

4 It says it was dedicated systems. One of the plants  
5 on this list had previously been approved for a dedicated system  
6 under Appendix A. That plant was Oconee. The license condition  
7 requires completion by December '81 and, in fact, this slide  
8 really wasn't meant to address dedicated and alternate systems --  
9 I'm sorry, dedicated systems which are running on another time  
10 scale. But that is also consistent with what we would be  
11 proposing to do.

12 MR. CASE: So we could wind up with a number of  
13 alternatives. We could agree that the date presently given in  
14 the license condition is inside the template, and we could leave  
15 it alone; we could agree that the date given in the license  
16 condition is outside the template, but some time in the future,  
17 and issue an order to change that date; we could determine that  
18 the date for compliance, using the template had already passed;  
19 and in those cases, we would recommend appropriate enforcement  
20 action.

21 MR. EISENHUT: So I guess in closing, the observation  
22 we would make is that on the seven circled plants for nine units  
23 have a limited number of items that are extending past November  
24 1. We would propose looking at those limited number of items  
25 and using the template, as Ed calls it, on the next page. We

1 propose going ahead and making a modification to their license as  
2 appropriate, I assume by order would be the appropriate vehicle,  
3 that would change their license condition.

4 COMMISSIONER BRADFORD: Let's see. You'd have to  
5 make a "no significant hazards" finding to do that?

6 MR. EISENHUT: That's correct.

7 MR. SHAPAR: Or public health and safety interest  
8 requires this immediate effectiveness.

9 MR. BICKWIT: Or a "no significant hazards" determina-  
10 tion.

11 MR. SHAPAR: If you do it by amendment rather than  
12 order. At least that's what the rules say.

13 MR. BICKWIT: That's what the rules say.

14 MR. CASE: Let me try to clarify it:

15 The Staff has looked at the individual items involved  
16 and the collection involved in these cases, and it is the  
17 Staff's view that extending a license condition, even involving  
18 all of those open items, does not involve a significant hazard.  
19 Some people argue that, but that's the Staff's view.

20 CHAIRMAN AHEARNE: Len, did you have an alternate  
21 approach?

22 COMMISSIONER BRADFORD: Let me just pursue that for a  
23 second. That must be geared pretty specifically to the time  
24 period involved, I take it? At some point that finding begins  
25 to undercut one's basis for adopting the rule.

1 MR. CASE: It's more based on that 90 percent of  
2 the things have been done, and the things left undone are the  
3 last 10 percent. So, given a 90 percent coverage, the 10  
4 percent is not significant. It's more based on that approach  
5 than the length of time, but I'd have to agree with you, that the  
6 length of time enters in.

7 MR. SHAPAR: Of course, you could put out a  
8 rule that would extend the dates and you want to make it  
9 immediately effective, you'd have to make some kind of counterpart  
10 to justify that.

11 MR. BICKWIT: That's not so.

12 MR. SHAPAR: Why not?

13 MR. BICKWIT: Because if it relieves restriction,  
14 then that is sufficient to make the rule effective upon  
15 publication.

16 MR. SHAPAR: Of course, that's the legal answer,  
17 the Commission is going to want to speak to the safety significance  
18 of it and the --

19 MR. BICKWIT: I'm just saying it is not a legal  
20 requirement to make any time whatever.

21 MR. SHAPAR: But the Commission would want to speak  
22 to it.

23 CHAIRMAN AHEARNE: Len, what is your alternative?

24 MR. BICKWIT: Well, the alternative that Howard and I  
25 have discussed to put this kind of flexibility into the rule, and

1 the reason for doing that is that the statute provides  
2 that licenses can be amended by rule. It does not require any  
3 kind of "no significant hazards" determination or public  
4 health safety or interest determination in order to make those  
5 amendments effective immediately, so that since you have a  
6 rulemaking before you, and in my view, it provided adequate  
7 notice to commenters, that something like this might be in the  
8 offing, it strikes me as a useful action on the part of the  
9 Commission -- a conservative action on the part of the Commission  
10 -- to use this rule to provide for amendments of the licenses,  
11 either generically or on a case-by-case basis.

12 CHAIRMAN AHEARNE: But what if the rule does not  
13 get out in time?

14 MR. BICKWIT: If the rule does not get out in time  
15 then you really have three options:

16 One, you can break off this piece of the rulemaking  
17 and put this out, if there is agreement on that piece. If  
18 there isn't agreement on that piece, then you go ahead and  
19 amend the license.

20 Or, as a third option, you allow the licensees to  
21 operate out of compliance with the license.

22 CHAIRMAN AHEARNE: I guess the last one I don't  
23 like.

24 MR. BICKWIT: I don't like it much myself.

25 MR. SHAPAR: That would be the situation unless some

1 other action --

2 CHAIRMAN AHEARNE: Unless we do something?

3 MR. SHAPAR: Right.

4 MR. BICKWIT: I'm just saying that I'm more  
5 comfortable with dealing with this in the rule, if we can get it  
6 out in time.

7 CHAIRMAN AHEARNE: I'm trying to make sure I  
8 understand clearly, though, because what I'm really concerned  
9 is we may not get it out in time.

10 MR. BICKWIT: Well, if you do not get it out in  
11 time, and you're uncomfortable with --

12 CHAIRMAN AHEARNE: It looks like we will be meeting  
13 again next week, and we have to go through the Federal Register  
14 notice, and so we will not get it out in time.

15 MR. BICKWIT: That's not clear to me, Mr. Chairman,  
16 but --

17 CHAIRMAN AHEARNE: Well, say there's a reasonable  
18 probability.

19 MR. BICKWIT: That's right. Well, if you do not get  
20 the rule out in time, you are reduced to two options. You've  
21 said that you don't like the third. You then go ahead and  
22 amend the licenses, as has been proposed by the Staff. I think  
23 that is a legally acceptable alternative.

24 CHAIRMAN AHEARNE: But you're saying that there is an  
25 option of trying to break a piece off and put it out as a rule?

1 MR. BICKWIT: That's right.

2 MR. CASE: Presumably the implementation schedule.

3 MR. BICKWIT: That's right.

4 MR. SHAPAR: But the question remains whether or not  
5 you can do even that on a timely basis. The probability is no.

6 COMMISSIONER BRADFORD: Len, with regard to doing it  
7 in the rule, I guess the only serious concern I have with that  
8 is that I gather it was less than clear to potential commenters  
9 that we would be using the rule as a vehicle for extending  
10 deadlines; that in fact --

11 MR. CASE: Or not extending deadlines, as the case  
12 may be.

13 COMMISSIONER BRADFORD: Well, I think particularly  
14 extending, though, because I think in the statement of considera-  
15 tions on the proposal we explicitly said that we were not going  
16 to be extending the deadlines, and so it would be --

17 MR. BICKWIT: Unusual circumstances.

18 COMMISSIONER BRADFORD: If one's concern in commenting  
19 on the rule were that we -- gee, the one thing I don't want  
20 them to do is extend the deadline, you might come to that  
21 sentence, breath a sigh of relief, and then direct your attention  
22 elsewhere.

23 MR. BICKWIT: As a legal matter, I think we have  
24 adequate notice, in the statement of considerations you have  
25 discussed the fact that there are requirements that presently

1 exist, even apart from this rule, and you are going to be  
2 considering that question, and you make the statement that  
3 all licensees will be expected to meet the requirements of this  
4 rule in its effective form, including whatever changes result  
5 from public comments.

6 So that I believe you have as a legal matter  
7 sufficient notice to comment.

8 MR. SHAPAR: Of course, you're making the rule  
9 immediately effective. Normally that's sufficient justification  
10 to justify --

11 MR. BICKWIT: I'm sorry, I didn't hear that.

12 MR. SHAPAR: Suppose you had a proposed rule and  
13 you wanted to extend the dates, you'd still want to make it  
14 immediately effective, and I assume your argument would still  
15 obtain.

16 MR. BICKWIT: I'm not arguing that we would make  
17 this rule effective immediately. I'm arguing that we would  
18 make the rule effective upon publication.

19 I do think you would have to provide some opportunity  
20 for a comment period on something like this, but I think it's  
21 been done.

22 CHAIRMAN AHEARNE: You lost me.

23 MR. BICKWIT: Can I differentiate between making a  
24 rule immediately effective and making the rule effective  
25 upon publication? When you make a rule immediately

1 effective, you provide for no comment whatever.

2 CHAIRMAN AHEARNE: But the rule effective upon  
3 publication is effective upon publication?

4 MR. BICKWIT: It's effective upon publication, but --  
5 it follows, in this case, a comment period.

6 CHAIRMAN AHEARNE: You mean you get comments before?

7 MR. BICKWIT: You've had the comment period.

8 CHAIRMAN AHEARNE: I see.

9 MR. BICKWIT: You've had a proposal, you now make  
10 the rule final, and what you're doing that's unusual is rather  
11 than waiting 30 days between the final rule and its effective  
12 date, you make the final rule effective upon publication in  
13 the Register.

14 CHAIRMAN AHEARNE: Peter, you've probably thought  
15 about these more than any of the Commissioners have. What do  
16 you see as the --

17 COMMISSIONER BRADFORD: Well, it is certainly neater  
18 and smoother -- it seems to me, at least, to be neater and  
19 smoother to do what Len is proposing. I'm not quite as  
20 comfortable as he with the statement that people have had an  
21 opportunity to comment on something that they were expressly  
22 told would not be up for grabs in the rule itself, but I'm  
23 really not entirely comfortable with what seems to me to be  
24 held in the Staff proposal, which is either a "no significant  
25 hazards" determination or whatever the other one is. I'm just

1 not -- respecting all the judgments involved, I think I would  
2 rather take my chances with the rule than to sanction a finding  
3 that these matters didn't involve a significant hazard, and if  
4 both approaches have some element of law, but I think I'd  
5 rather deal with that than the rule.

6 MR. BICKWIT: Let me make an additional point.  
7 These are additive approaches, at least under our proposal. If  
8 there is a challenge to this rule and it is struck down, counter  
9 to what we would expect, there is still the opportunity to go  
10 the route that Staff proposes and to use the "no significant  
11 hazards" determination finding to then amend the rules, to then  
12 amend the licenses.

13 CHAIRMAN AHEARNE: Now if we went your route, would  
14 your proposed -- if we tried to break out, as you say, what is  
15 it that you would end up breaking out? What would you end up with?

16 MR. BICKWIT: You would end up breaking out the  
17 Staff proposal for relaxation of the existing requirements.

18 CHAIRMAN AHEARNE: You mean the same thing that we have  
19 just talked about?

20 MR. BICKWIT: That's right.

21 Now we would have to work with the Staff to put that  
22 into rule form, and I would propose that that be done as quickly  
23 as possible.

24 MR. SHAPAR: You mentioned a number of options in  
25 your paper.

MR. BICKWIT: That's true.

1 MR. SHAPAR: Are you prepared to recommend one at  
2 this time? Even assuming that it applies only to limited items.

3 MR. BICKWIT: Staff has done a lot of thinking about  
4 this, and I'd like to defer to the Staff on what makes the  
5 most sense. I find all of these options legally acceptable.

6 MR. CASE: I only have one. Do you have something  
7 beyond October --

8 MR. BICKWIT: October 20th. And basically the  
9 options are -- there are really two effective options: One,  
10 that you simply put a generic schedule right in the rule.

11 The second is you allow for case-by-case relaxation  
12 of the existing schedule, but in no case out beyond the generic  
13 schedule that the Staff would propose. And I don't have any  
14 particular preference on that.

15 MR. DICKS: I think you've got to make up your  
16 mind which way you want to go.

17 MR. SHAPAR: But even that would have to be changed.

18 MR. BICKWIT: I'm confident that that could be  
19 worked out. I would say if the Commission has no problem with  
20 the mechanism the Staff has proposed, then we would cut the  
21 draft right into the rule.

22 MR. CASE: Assume that the rest of the rule isn't  
23 going to get approved; you'd issue this as a separate rule,  
24 somehow making reference to the previous --

25 MR. BICKWIT: Exactly.

1 MR. CASE: -- rulemaking action.

2 CHAIRMAN AHEARNE: Upon publication in the Federal  
3 Register; is that correct? And when does the Federal Register  
4 come out?

5 MR. BICKWIT: It's usually, if we send something off  
6 to the Federal Register, it's generally published within about  
7 three or four days.

8 CHAIRMAN AHEARNE: And pardon my ignorance, does  
9 the Federal Register get published every day?

10 MR. BICKWIT: Yeah.

11 MR. CASE: Except Monday.

12 MR. MALSCH: We might be able to make arrangements  
13 for publication the following day or two days.

14 CHAIRMAN AHEARNE: So actually then you would say that  
15 you -- I guess you're saying that if you could be sure by  
16 Monday, at the very latest, that you could get it in?

17 MR. BICKWIT: Yes, but I'd like to again raise a  
18 point that you weren't very happy with the first time I raised  
19 it, which is --

20 COMMISSIONER BRADFORD: It will look a little better  
21 in this context.

22 MR. BICKWIT: If the licensees are out of compliance  
23 with their license for a day or two, when we have a solution  
24 on hand and on the way to the Federal Register, and can inform  
25 the licensee of that, I don't have particular problem.

1 CHAIRMAN AHEARNE: Peter?

2 COMMISSIONER BRADFORD: Well, I would just reinforce  
3 Len's point. I think it would be better to get it published  
4 beforehand, but it doesn't mean that we have to start shutting  
5 plants down on the 1st of November.

6 CHAIRMAN AHEARNE: I guess what I'd like then to ask  
7 is to see if you can't draft that, and then it appears we are  
8 in the situation where we have that as a possible fallback to go,  
9 if we just can't get easily something else.

10 Myself, I'm a lot more comfortable with having some-  
11 thing published than us having -- saying, well, you can be out  
12 of compliance for a few days, it's --

13 COMMISSIONER BRADFORD: No, I agree with that, it's  
14 undesirable, and I would hope to avoid it. I'm, as I say, a little  
15 more comfortable with it in this context than in the earlier one  
16 where it seemed more open-ended in its application.

17 CHAIRMAN AHEARNE: The difficulty is that once you  
18 establish the willingness to accept it in one context, it --

19 COMMISSIONER BRADFORD: Well, let's make that  
20 meeting on Tuesday morning.

21 CHAIRMAN AHEARNE: You will draft that.

22 MR. CASE: I assume you'd like some help?

23 MR. BICKWIT: Oh, most definitely.

24 MR. CASE: Then again I come back to what you had  
25 previously told me, that you would like by Friday.

1           Could I get some order of priority, in case because  
2 I'm working on this other thing, I can't make all of them? I  
3 would assume --

4           CHAIRMAN AHEARNE: I would have thought those things  
5 were very easy.

6           All right, let's say then Monday.

7           MR. CASE: Well, I think probably the first two are  
8 more important than -- timewise, at least, than the other two.  
9 So if I can get anything in advance, I will do them in the order  
10 that you gave me. How's that?

11          CHAIRMAN AHEARNE: Fine.

12          Bill, is there anything else?

13          Peter? Len? Anybody?

14          All right, that's it.

15          (Whereupon, at 3:20 p.m., the meeting was  
16 adjourned.)

17                           \*   \*   \*   \*

NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the  
COMMISSION MEETING

in the matter of: Discussion and Vote on Fire Protection Program

Date of Proceeding: October 21, 1980

Docket Number: \_\_\_\_\_

Place of Proceeding: Washington, D. C.

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Ann Riley

Official Reporter (Typed)

Ann Riley

Official Reporter (Signature)



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

OCT 21 1980

MEMORANDUM FOR: Chairman Ahearne  
Commissioner Gilinsky  
Commissioner Hendrie  
Commissioner Bradford

THRU: William J. Dircks, Executive Director  
(Signed) William J. Dircks  
for Operations

FROM: Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

SUBJECT: RULE ON FIRE PROTECTION PROGRAM FOR NUCLEAR POWER  
PLANTS OPERATING PRIOR TO JANUARY 1, 1979 (SECY-80-45A)  
JP

Enclosed are revisions to Sections III.G.2., III.G.3. and III.L.7 of the proposed fire protection rule. These revisions supercede all others concerning these Sections previously proposed by the staff. The staff recommends these revisions, whether these three Sections are made applicable only to pre-79 operating plants where the issues involved are still open, or whether these Sections are backfit to all pre-79 operating plants.

The purpose of the revision to III.G.2 is threefold--minor technical improvements; making the requirements of the Section applicable to non-safety associated circuits; and providing for accepting deviations from the requirements of this Section by exemption, rather than by use of an 'equivalent' clause within the Section itself. I believe the former method for accepting deviations is more appropriate here, since it would better assure consistency of treatment in this key area of the fire protection program.

The purpose of the revision to III.G.3 is to add a requirement for providing fire detection and fire protection systems, which was inadvertently omitted.

Contact:  
E. G. Case, NRR  
492-7726

The Commission

-2-

The purpose of the revision to III.L.7 is to add language that makes it clearer that we are concerned with all types of fire-induced failures of non-safety circuits associated with systems and equipment needed for safe shutdown--not only with non-safety circuit failures that prevent operating of the safe shutdown systems, but also with failures that could result in mal-operation of the safe shutdown systems in such a manner that it is more difficult to cope with plant transients than would result from simple non-operation of the safe shutdown systems.

*H. R. Denton*  
| Harold R. Denton, Director  
Office of Nuclear Reactor  
Operation  
L

Enclosures:  
As stated

cc: SECY ✓  
OGC  
OPE

10/20/55  
Replace III G-2 and III G-3 on pages 46 and 47 with the following:

2. Where cables or equipment, including associated non-safety circuits which could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of containment, one of the following means of assuring that one of the redundant trains is free of fire damage shall be provided:

- (a) Separation of cables and equipment, including associated non-safety circuits, of redundant trains by a fire barrier having a three-hour rating. Structural steel forming a part of, or supporting, such fire barriers shall be protected to provide fire resistance equivalent to that required of the barrier; or
- (b) Separation of cables and equipment, including associated non-safety circuits, of redundant trains by a horizontal distance of more than 20 feet, with no intervening combustibles or fire hazards. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area; or
- (c) Enclosure of cable and equipment, including associated non-safety circuits, of one redundant train in a fire barrier having a one-hour rating. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area.

-2-

Inside non-inerted containments, any one of the fire protection means specified above shall be provided. Alternatively, one of the following fire protection means shall be provided:

- (d) Separation of cables and equipment, including associated non-safety circuits, of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazards; or
- (e) Installation of fire detectors and an automatic fire suppression system in the fire area; or
- (f) Separation of cables and equipment, including associated non-safety circuits, of redundant trains by a noncombustible radiant energy shield.

3. Alternative or dedicated shutdown capability,<sup>8/</sup> independent of cables, systems or components in the area, room or zone under consideration, shall be provided:

- (a) Where the protection of systems whose function is required for

---

<sup>8/</sup> Alternative shutdown capability shall be provided by rerouting, relocation or modification of existing systems; or dedicated shutdown capability shall be provided by installing new structures and systems for the function of post-fire shutdown.

hot shutdown does not satisfy the requirements of paragraph G.2 of this section; or

- (b) Where redundant trains of systems required for hot shutdown located in the same fire area may be subject to damage from fire suppression activities, or from the rupture or inadvertent operation of fire suppression systems.

In addition, fire detectors and an automatic fire suppression system shall be installed in the area, room or zone under consideration.

Replace III L.7 on page 61 with the following:

7. The safe shutdown equipment and systems for each fire area shall be isolated from associated non-safety shutdown circuits in the fire area so that hot shorts, open circuits, or shorts to ground in the associated circuits will not prevent operation or cause maloperation of the safe shutdown equipment. The separation and barriers between trays and conduits containing associated circuits of one safe shutdown division and trays and conduits containing associated circuits or safe shutdown cables from the redundant division shall be such that a postulated fire involving associated circuits will not prevent safe shutdown.<sup>10/</sup>

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10/ An acceptable method of complying with this alternative would be to meet Regulatory Guide 1.75 position 4 related to associated circuits and IEEE 384-1974 (Section 4.5) where trays from redundant safety divisions are so protected that postulated fires affect trays from only one safety division.

## APPROVED APP. A MODIFICATIONS NOT SCHEDULED FOR COMPLETION BY NOVEMBER 1, 1980

PLANT NAME	NO. OF ITEMS	ORIG. SCHED.	NO. OF ITEMS EXCEEDING SCHED.	LAST ITEM	NRC Approval
INDIAN PT. 2	3	1/81	0	1/81	6/30/80
INDIAN PT. 3	1	8/81	0	8/81	3/6/79
NINE MILE PT.	12	6/81	1	7/81	9/80
NORTH ANNA 1	3	1/81	0	1/81	4/79
ARKANSAS 2	3	3/81	0	3/81	9/78
BEAVER VALLEY 1	4	2ND REFUEL 10/80	4	2ND REFUEL 3/82	6/79
CALVERT CLIFFS 1, 2	ALL	11/1/80	5	7/82	10/80
CRYSTAL RIVER 3	ALL	AFTER NRC APPROVAL	5*	9/81	10/80
R. E. GINNA	23	6/81	0	6/81	9/80
PEACH BOTTOM 2/3	ALL	18 MOS. AFTER NRC APP.	28*	2/82	10/80
POINT BEACH 1/2	14	5/81	0	5/81	10/80
PILGRIM 1	ALL	11/1/80	1	UNK.	
PRAIRIE ISLAND 1/2	ALL	10/30/80	84	4/1/81	9/79
SAN ONOFRE 1	219	END OF SEP	0	END OF SEP	10/80
SURRY 2	2	REFUEL 3/81	23	REFUEL SLIP 12/81	9/79
TURKEY PT. 3/4	9	12/1/80	2	5/81	7/80
YANKEE ROWE	ALL	11/1/80	24	11/30/80	10/80
MONTICELLO	ALL	11/1/80	2	5/81	6/80
OYSTER CREEK	ALL	11/1/80	1	2/81	3/78
PALISADES	ALL	11/1/80	2	10/81	9/80

\*THESE ITEMS HAVE NOT EXCEEDED THE SCHEDULE.  
NRC APPROVAL WAS DELAYING ITEM

PROPOSED APPROACH  
NON-IMPLEMENTED APPENDIX A ITEMS

- Administrative controls, manpower changes, and training
  - All Appendix A review matters are implemented
- Hardware modifications (shutdown and non-shutdown items)
  - Original license condition schedules were set on basis of reasonableness for a responsive licensee
    - No shutdown: 12 mos. from approval date
    - Shutdown: 1st refueling outage after 9 mos.
    - One plant unique - not best dates
  - Licensee must demonstrate good faith effort in completing as soon as practicable
  - No later than Appendix A dates (assuming 11/1/80 approval)
- Dedicated systems
  - Only one plant (Dconee) approved under Appendix A
  - License condition requires completion by December 1981

# STATUS OF FIRE PROTECTION MODIFICATIONS

PLANT NAME	INCOMPLETE APP. A ITEMS				3 BACKFIT ITEMS			APP. R ITEMS	
	ADMINISTRATIVE	NON-SHUTDOWN	SHUTDOWN	LATEST SCHEDULE	ASSOC. CKTS	SEPARATION & BARRIERS	EMERGENCY LIGHTING	ADMINISTRATIVE	HARDWARE
BROWNS FERRY 1, 2, 3	0	0	0	NA	X	X	X	0	0
BRUNSWICK 1, 2	0	0	0	NA	X	X	X	0	0
D. C. COOK	0	0	0	NA	X	X	X	0	0
COOPER	0	0	0	NA	X	X	X	0	0
DAVIS BESSE 1	0	0	0	NA	X	X	X	0	0
FT. ST. VRAIN	0	0	0	NA	X	X	X	0	0
HATCH 1, 2	0	0	0	NA	X	X	X	0	0
INDIAN PT. 2	0	0	3	1/81	X	X	X	0	0
INDIAN PT. 3	0	0	1	8/81	X	X	X	0	0
KEWAUNEE	0	0	0	NA	X	X	X	0	0
OCONEE 1, 2, 3	0	0	0	NA	X	X	X	0	0
RANCHO SECO	0	0	0	NA	X	X	X	0	0
NINE MILE PT. 1	0	11	1	7/81	X	X	X	0	0
NORTH ANNA 1	0	0	3	1/81	X	X	X	0	0
NORTH ANNA 2	0	0	0	NA	X	X	X	0	0
SALEM 1	0	0	0	NA	X	X	X	0	0
SEQUOYAH 1	0	0	0	NA	X	X	X	0	0
TROJAN	0	0	0	NA	X	X	X	0	0
ARKANSAS 1	0	0	0	NA			X	0	2
ARKANSAS 2	0	0	3	3/81			X	0	2
BIG ROCK PT.	0	0	0	NA		X	X	0	1
BEAVER VALLEY 1	0	0	4	3/81		X	X	0	1
CALVERT CLIFFS 1, 2	0	2	3	7/82			X	0	6
CRYSTAL RIVER 3	0	4	1	9/81			X	0	3
DRESDEN 1	PRIOR TO STARTUP						X	0	2
DRESDEN 2, 3	0	0	0	NA			X	0	2