

**NUCLEAR REGULATORY COMMISSION**

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**IN THE MATTER OF:**

CAROLINA POWER AND LIGHT COMPANY

(Shearon Harris Nuclear Power Plant,  
Units 1, 2, 3 and 4)

Docket Nos. 50-400  
50-401  
50-402  
50-403

**Place -** Raleigh, North Carolina

**Date -** 8 March 1979

**Pages** 3507 - 3792

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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In the matter of:

CAROLINA POWER AND LIGHT COMPANY : Docket Nos. 50-188  
: 50-189  
(Shearon Harris Nuclear Power Plant, : 50-192  
Units 1, 2, 3 and 4) : 50-193  
: :  
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Public Utility Commission  
Hearing Room, Dobbs Building,  
Salisbury Avenue,  
Raleigh, North Carolina.

Thursday, March 8, 1975.

Hearing in the above-entitled matter was  
reconvened, pursuant to adjournment, at 8:30 a.m.

BEFORE:

- EVAN W. SMITH, Esq., Chairman,  
Atomic Safety and Licensing Board.
- DR. J. VENN REEDS, Esq., Member.
- MR. GLENN O. BRIGHT, Member. (Not present.)

APPEARANCES:

On behalf of the Applicant:

- GEORGE F. TROWBRIDGE, Esq. and JOHN H. O'NEILL, Jr.,  
Esq., Shaw, Pittman, Potts and Trowbridge,  
1800 M. Street, N.W., Washington, D. C. 20036.
- RICHARD E. JONES, Esq., Associate General Counsel,  
Carolina Power and Light Company.

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On behalf of the NRC Regulatory Staff:

EDWIN J. REIS, Esq., Office of the Executive  
Legal Director, Washington, D. C.

On behalf of the Attorney General of North Carolina:

DENNIS P. MYERS, Esq. and DAVID GORDON, Esq.,  
Office of the Attorney General, Raleigh,  
North Carolina.

On behalf of the Conservation Council and Wake  
Environment, Inc.:

THOMAS S. ERWIN, Esq., Water Tower Court,  
115 W. Morgan Street, Raleigh, North Carolina  
27602.

3/8/79

C O N T E N T S

1					
2	<u>Witnesses</u>	<u>Direct</u>	<u>Cross</u>	<u>Redirect</u>	<u>Recross</u> <u>Board</u>
3	J. A. Jones	)3516			2552
4	Edwin E. Utley	)3555	3565		3731
5	Harold R. Banks)				
6	M. A. McDuffie )				
7	(Continued)				
8	Harold R. Banks)	3767	3770		3773
9	Leonard Loflin)				
10	Samuel McManus)				
11	<u>Exhibits</u>				<u>Iden.</u> <u>Evi.</u>
12	App. LL	O'Reilly ltr 12/27/77 to Jones			3523    3523
13	App. MM	CP&L document "Corporate Quality Assurance Program, Policy Statement"			3537    3538
14	App. NN	CP&L document "Corporate Nuclear Safety Policy"			3538    3538
15	App. OO	CP&L document "Corporate Health Physics Policy"			3538    3538
16					
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P R O C E E D I N G S

1  
2 MR. JONES: Mr. Chairman, as a preliminary matter,  
3 would it be appropriate at this moment to address the question  
4 we left open yesterday regarding Figure 9 in the testimony of  
5 Messrs. Utley and Banks?

6 CHAIRMAN SMITH: Yes, sir.

7 MR. JONES: Mr. Chairman, I think when put in the  
8 context of the use actually made of it, the figure is  
9 perfectly appropriate and admissible in an administrative  
10 hearing. And in the testimony it has been, and the use made  
11 of it, properly qualified.

12 If you look at the statement made by the witnesses  
13 on page 49, they identify it as being taken from a recent  
14 study by Ebasco. They state that:

15 "(It) illustrates the escalation of  
16 regulatory requirements during the period of the  
17 construction and startup of Brunswick."

18 They point out that:

19 "The impacts attributed to each change  
20 are an estimate by Ebasco on an industry-wide  
21 basis."

22 And they acknowledge that:

23 "Actual impacts were different for  
24 each specific plant. Nonetheless, (based on their  
25 own opinion, they say that) the chart graphically

eb2

1 illustrates the magnitude of the changes with which  
2 (CP&L) coped."

3 So that the source of the information is identified.  
4 The witnesses themselves are generally familiar with  
5 the regulatory requirements, and the growth of regulatory  
6 requirements over the years, and they have formed an independent  
7 judgment. I think it is clear from the testimony that  
8 the figure accurately illustrate the general growth in magnitude  
9 of regulatory requirements.

10 Furthermore, the information itself was prepared  
11 by Westinghouse and Ebasco, both of whom are well-recognized  
12 companies in the nuclear industry who have, over the years,  
13 had a need to be very familiar with regulations and with how  
14 to interpret the significance of regulations.

15 Finally, it seems to me that in the context of an  
16 administrative hearing of this sort, with the general informality  
17 with which we approach the introduction of documentary  
18 evidence, that Mr. Reis has put the applicant at right  
19 much of a disadvantage by waiting until the time the witnesses  
20 take the stand to object to the admission of a piece  
21 of prefiled testimony.

22 Had we known of his objection earlier we could  
23 have arranged to have a witness from Ebasco to support the  
24 particular figure if in fact that were necessary.

25 We would, however, because of the limited use made

WRB/eb3

1 of the figure, be willing to stipulate that the exhibit is  
2 not presented to establish the importance or impact of any  
3 single regulation, and that was I think one of the objections  
4 that Mr. Reis had relative to the size of each block, but  
5 that it is to confirm and to graphically illustrate the over-  
6 all magnitude of the regulatory changes which were put in  
7 place in each of the specified years.

8 So, based on all of these points, I think that  
9 in fact this figure is admissible and that, if anything, the  
10 questions only go to the weight to be given to it in findings.

11 MR. REIS: If I may be heard, my position of  
12 course is that it is inadmissible. I don't think that there  
13 is much question though of the growth of regulatory require-  
14 ments. However, this illustrates in a particular way and in  
15 a particular manner, and it has implications and implied  
16 meaning in showing it, in heading up boxes and columns in  
17 this manner.

18 And unless we can cross-examine on it, I don't  
19 see where it is competent. Ebasco is not here. We don't  
20 know why it was prepared, whether it was prepared for hearings  
21 on the Hill, whether it was prepared for some presentation  
22 to get support for a change in law, or a changed regulatory  
23 climate. We don't know why it was done.

24 And I think the testimony brings out in other  
25 places -- I don't think Applicant is particularly hurt by

WRB/eb4

1 this. The testimony certainly brings out what they want to  
2 say: there was an increase in regulatory requirements. I  
3 don't question that.

4 It's just that I don't believe this is the proper  
5 illustration of it or a proper piece of evidence for this  
6 hearing.

7 CHAIRMAN SMITH: Mr. Reis has really pinpointed  
8 the concern about it. One of the tests of reliability that  
9 we would apply to a document prepared outside of -- by some-  
10 one not a party, or even the parties as far as that's con-  
11 cerned, would be if it were prepared for purposes which tend  
12 to assure the reliability of it.

13 But we have no basis for making any conclusions  
14 about why this was prepared. If I were to follow my in-  
15 clinations, this was prepared to demonstrate, for the very  
16 purpose of demonstrating the thing that you offer it for,  
17 which is almost self-defeating right there. And the people  
18 who prepared it aren't there.

19 For example, it goes back to the rule, the cor-  
20 porate document rule where documents prepared in anti-  
21 cipation of litigation fall outside the reliability test of  
22 the business record rule. And this is very close to that  
23 kind of proscription on the use of documents.

24 Now I question whether anyone doubts that in  
25 these years these events took place. I think that the major



WRB/eb 5

1 objection is the proportion or the magnitude given to each  
2 event. And your witnesses have stated that they didn't make  
3 any judgment based upon it; their corporation did not act  
4 based upon this. It is simply unsupported opinion of some-  
5 one who is not a party, not available to be examined on it.  
6 And I just don't believe it can be accepted.

7 DR. LEEDS: I would like to point out that if you  
8 look at the last column, 1977, if I can visually measure the  
9 width of the -- the height of the blocks I find there were  
10 more than one "most significant impact" in those years. So  
11 I have a problem even interpreting what that means.

12 CHAIRMAN SMITH: There is one there in 1977 that  
13 says "Various Changes Exhiting Regulatory Guides."

14 If I felt that this document was so critical to  
15 your presentation, well, we would figure out some way to  
16 satisfy it, the concerns of Counsel. We would even give  
17 you the opportunity to bring in Ebasco. But your witnesses  
18 know what their problems were better than Ebasco does.

19 MR. JONES: That's correct. At this point we  
20 certainly would not suggest that we want to defend this  
21 document hard enough to ask for time to bring in Ebasco or  
22 anything of that nature. So we will --

23 CHAIRMAN SMITH: You have witnesses here who know  
24 what their problems were.

25 MR. JONES: We understand your point. We do think

WRB/eb6

1 it would have been appropriate for Mr. Reis to have raised  
2 an objection to this, since it was prefiled, earlier than  
3 he did, but we will defer to the judgment of the Board on  
4 it.

5 DR. LEEDS: Well, surely your witnesses can tell  
6 me the effect of industrial security and emergency planning  
7 in 1975 and the effect on Carolina Power and Light far better  
8 than this chart can.

9 MR. JONES: Yes, sir.

10 DR. LEEDS: No question about that, is there?

11 MR. JONES: That's correct. And they have made  
12 such statements. This was sort of a good kind of a summary  
13 thing that was already available.

14 CHAIRMAN SMITH: And of course your point I think  
15 is well taken, that your witnesses are not blaming the  
16 problems on regulatory concerns as an after-the-fact justi-  
17 fication. Your point is this is an industry-wide problem  
18 and this demonstrates it, and I appreciate that. It's just  
19 that it is not competent evidence for that purpose.

20 MR. JONES: All right.

21 Shall we proceed with further questions of our  
22 witnesses?

23 CHAIRMAN SMITH: Please.

24 MR. JONES: Very well.  
25

WRB/eb7

1           Whereupon,

2                           J. A. JONES,

3                           EDWIN E. UTLEY,

4                           HAROLD R. BANKS,

5                                   and

6                           M. A. MC DUFFIE

7 resumed the stand on behalf of the licensee and, having been  
8 previously duly sworn, were examined and testified further  
9 as follows:

10                   CHAIRMAN SMITH: We had formerly ruled that the  
11 testimony would be received, including page 50, but page 50  
12 is in there solely for the purpose of preserving the record  
13 and may not be the basis -- it is not evidence and may not  
14 be the basis of findings.

15                           DIRECT EXAMINATION (Continued)

16                           BY MR. JONES:

17                   Q     Mr. Jones, if I may address a few additional  
18 questions to you in order to clarify some of the questions  
19 that have come up during the course of the hearing:

20                           First, let me ask you if you have any knowledge  
21 or recollection of how the term "SRJ desirable" found its  
22 way into the Brunswick technical specifications.

23                   A     (Witness Jones) Yes. The culprit has now been  
24 located, and I'm it.

25                           In insisted and required, actually, of my folks

WRB/eb8

1 to put that word "desirable" on these boxes, against their  
2 wishes and advice. I did not know, and my intention-- I  
3 didn't even think whether it would or wouldn't get in the tech  
4 specs until this came up, and I got back into it and I dis-  
5 covered it was in the tech specs.

6 But my purpose in putting it there was to show  
7 the folks at the plant, the senior management, that senior  
8 management wanted them to take advantage of all the training  
9 that was available to them; that we were willing for them to  
10 come off of the job whenever they could, their regular job,  
11 and go over and take this training course.

12 To me, this was a very desirable training course.  
13 It was already set up. It was arranged in phases so that,  
14 depending on a man's education and his prior experience, he  
15 could slide in at the appropriate spot and go ahead and  
16 complete the course.

17 And in doing this, it would give the company  
18 flexibility in moving him from one box to another on this  
19 supervisory level because, after all, this is where our  
20 superintendents and managers come from.

21 I did not intend for them to take the official  
22 NRC exam but to take the exam that's given by our own  
23 company, that we give everybody, getting them ready for the  
24 official NRC exam.

25 Also, I felt that it would be very much to the

WRB/eb9

1 advantage of the people in these boxes, when we started con-  
2 sidering who was going to be the next superintendent and  
3 manager, that this certainly would be a plus in their favor.

4 I think it's a good schema. It's a good way of  
5 showing that senior management is willing and wants them to  
6 take this.

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1B WNB/wbl

1 Now we realized, or I realized that when a man  
2 goes to a new supervisory position that it takes him some  
3 time to get acclimated to this new position and feel com-  
4 fortable in this new position. So I didn't mean that he had  
5 to do this-- The intention wasn't that as soon as he went  
6 into it, but within the next two to five years, depending  
7 on his experience and on other factors at the plant that  
8 he could, as the plant management felt they could spare  
9 him out of his regular job, that he would go over and enter  
10 into this course that was already set up there.

11 Q How many of your people have proceeded to take  
12 SRO training, either those people who now occupy management  
13 positions or, perhaps, people at the plant who are pro-  
14 fessionals but who are not currently in either operating  
15 positions or in management positions?

16 Perhaps you would like to defer this to--

17 A I will have to defer this question. I can't give  
18 you the exact number.

19 But I would like to make one more statement,  
20 however, that I've become aware of, which I think is real  
21 good.

22 Since I insisted that it be put in the organiza-  
23 tion chart-- Now these organization charts are the offi-  
24 cial stamp of approval when they have these boxes authorized  
25 and everything in order. I found people in the plants have

WRB/wb2

1.170

1 used this for another purpose which I felt was excellent;  
2 and that is, they take engineers with proper education, they  
3 slide them into the appropriate place. These people are still  
4 in staff positions. And they put them through this program.  
5 Well certainly that puts them in a much better position to be  
6 promoted into supervisory ranks. And this is something  
7 they've done on their own, and I think it's a very good use  
8 of it.

9 Q Mr. Banks, can you provide any more detail relative  
10 to how many people at the Brunswick and/or Robinson plant  
11 have undergone SRO training, or are in SRO training?

12 A (Witness Banks) Yes. At the present time at  
13 the Robinson plant we have fifteen qualified SROs. We have  
14 three individuals that have completed the training but not  
15 taken the NRC li ense. Of those fifteen, two of them are  
16 supervisors, two of them are in staff positions, six of them  
17 are shift foremen, and of our operators six -- five of those  
18 have completed the SRO and have been licensed.

19 At the Brunswick plant we have thirty SROs,  
20 seventeen ROs there as well. We have six people that have  
21 completed the training but have not taken the license exam.  
22 Of those, two of them are supervisors, seven are in staff  
23 positions, eight of them are shift foremen, five of them are  
24 shift specialists, and eight of them are operators, that  
25 have completed it.

WRB/wb3

1 To put it a little bit in perspective, for  
2 normal operation of the Brunswick plant by the tech spec  
3 under most restricted conditions of operation for two units  
4 operating we're required to have two SROs and three operator  
5 licenses there at all times. So that requires, on a five-  
6 shift rotating basis, ten SROs. We have thirty.

7 A (Witness Utley) I think it's also important to  
8 recognize with respect to the SROs, that training is  
9 directed to the operation of the plant per se, and it is not  
10 directed toward the maintenance and engineering functions of  
11 the plant. And in these desired positions, they did not  
12 fill positions directly related to operations; they were in  
13 positions relating to engineering and maintenance type work.

14 Q Mr. Jones, is the program and the involvement  
15 of plant personnel in SRO training following pretty much your  
16 original intent at this point, would you say, or not?

17 A (Witness Jones) Yes, it certainly is. Because  
18 certainly from my position I couldn't put priorities on the work  
19 at the plant. The men there, the local management had to do  
20 this. They, I think, understood what the intent of it was,  
21 and that at the appropriate time, and taking into account all  
22 the other work -- and certainly at the plant the job comes  
23 first; but as soon as they possibly could they would move  
24 these folks out. And I recognize that some of them would have  
25 to go out of their positions for several months until they



WRB/wb4

1 could place somebody in it temporarily. But we felt it was  
2 well worth the money spent. And we feel like there's been a  
3 good program. I personally feel like they've carried out  
4 the intent of it in view of starting up two units and trying  
5 to get leveled out.

6 Q Turning to another matter, Mr. Jones. The ques-  
7 tion has come up during the course of the hearing relative  
8 to the meeting with the Atlanta Inspection and Enforcement  
9 people in Atlanta on January 11th, 1978.

10 Do you have any recollection of that meeting,  
11 and did you attend such a meeting?

12 A Yes, I did attend such a meeting. And I have  
13 some recollection of it. I don't recollect all the details  
14 but I can certainly give the impressions I left there with  
15 and brought home.

16 Q Did you receive any written confirmation of the  
17 meeting?

18 A Yes, I did.

19 Q Let me hand you a letter dated December 27, 1977  
20 addressed to you from Mr. James P. O'Reilly, and ask if you  
21 can identify that as the confirmation of the meeting that  
22 you received?

23 (Handing document to the witness)

24 A Yes, it is the confirmation of the meeting. We  
25 had already agreed on a date, and this was confirmation. And

WRB/abl 1 attached to it is an agenda.

2 MR. JONES: Mr. Chairman, I would like to ask  
3 that this letter which has been distributed to the parties  
4 be identified as Applicant's Exhibit LL.

5 (Whereupon, O'Reilly ltr of  
6 12/27/77 to Jones was marked as  
7 Applicant's Exhibit LL for  
8 identification.)

9 MR. JONES: If there is no objection, I would  
10 request that it be received in evidence. This is the letter  
11 I think perhaps Dr. Leeds has referred to earlier.

12 CHAIRMAN SMITH: There being no objection,  
13 Applicant's Exhibit LL, a letter dated December 27, 1977,  
14 from O'Reilly to Jones, is received into evidence.

15 (Whereupon, Applicant's LL,  
16 having been previously  
17 marked for identification, was  
18 received in evidence.)

19 BY MR. JONES:

20 Q Mr. Jones, could you now tell us what you remember  
21 about the purpose of the meeting, and what transpired at that  
22 meeting?

23 A (Witness Jones) Well, let me give a bit of back-  
24 ground.

25 Initially when I&E started function for us, we

WRB/eb2

1 were concerned. The management at Atlanta at that time had  
2 paid us a visit to tell us what their over-all program was.  
3 And as part of their program they told us that occasionally  
4 that they would come visit us, to just discuss the over-all  
5 programs, and at times they would ask us to come to Atlanta.

6 Of course, this was before Mr. O'Reilly's time,  
7 and we had had such meetings before.

8 Well, I had never met Mr. O'Reilly. I think--  
9 I'm almost sure I had talked with him on the telephone but  
10 I had never met him. So I thought this was a good idea to  
11 get acquainted. I was under the impression that it was more  
12 or less one of the routine meetings. But of course in a  
13 routine meeting you discuss whatever their evaluation of your  
14 performance has been up to that time in general terms.

15 Well, in the meeting, at the beginning of the  
16 meeting there was more discussion on Robinson than there was  
17 on Brunswick which frankly surprised me just a little bit  
18 because there seemed to be lots more interest in Brunswick  
19 naturally, having started up two units.

20 But I viewed the meeting basically that  
21 Mr. O'Reilly was giving me some of his philosophy. He said  
22 he felt like it was the fair thing to do and I agreed with  
23 him. I thought it was thoughtful on his part. Here he was  
24 new and he had his own policies and his own beliefs about  
25 how he should run the inspection program in this region.

WRB/eb3

1 I came away with the impression that there was  
2 going to be more inspections and tougher inspections. I  
3 think he didn't use those words but that was the impression  
4 I came away with.

5 He was doing some reorganizing within his own  
6 shop there, and of course he asked some of his top folks  
7 there to make presentations to us on how they were going to  
8 function from here in, in their particular areas.

9 He kept referring to a company in the region from  
10 which he had just come, that apparently he thought was doing  
11 a real good job. And that was real interesting to me because  
12 I didn't know any of us ever did a good job in the eyes of  
13 these gentlemen.

14 So I asked him in what way was he really talking?  
15 And he said in their administrative and procedures control  
16 that he felt like they were very responsive. And he wasn't  
17 too familiar with us yet except on the record, and he looked  
18 like he felt they were doing a better job than the record  
19 indicated that we were doing in this area.

20 I asked him if he would give me the name of the  
21 company because if we could learn anything from them we  
22 certainly wanted to do that.

23 Later he called me. He didn't want to divulge  
24 it but later he called me and gave me the name of the company.  
25 It was Connecticut Yankee, their Haddam Neck plant. And we

WRB/eb4

1 sent some people up there.

2 Mr. Banks here was one of the people that went  
3 up there to review their program and see what it was that  
4 they were doing that we had not learned how to do yet.

5 He mentioned LERs. He felt like we were getting  
6 too many LERs, that this was going to be an area he was  
7 going to emphasize particularly.

8 He also mentioned that on the emergency  
9 preparedness, that this was sort of a big thing with him.  
10 He felt like maybe enough emphasis hadn't been put on that  
11 before.

12 Security of course was sort of still new, and we  
13 hadn't any of us learned exactly how to handle it, and he  
14 emphasized that there was going to be a lot of scrutiny of  
15 us in the security area.

16 But I think he was letting me know that just from  
17 reviewing our record there he felt like we ought to improve  
18 in these general areas, and that he was going to do his part  
19 to see that we did improve.

20 Q Mr. Jones, had there, to your knowledge, been  
21 any unusually significant events or problems, either on  
22 Robinson or Brunswick, which precipitated this meeting or  
23 which turned out to be the focal point of the meeting?

24 A No, not to my knowledge. He talked about both  
25 plants, both programs, and where he wanted to see us improve.

WRB/eb5

1 Q Now another question that has been raised during  
2 the course of the hearing thus far is whether the company  
3 paid competitive wages at Brunswick in 1974, '75 and '76,  
4 and I suppose not just Brunswick but Robinson and other plants  
5 as well.

6 Do you know, Mr. Jones, if competitive wages  
7 were paid during this period? And do you conduct regular  
8 surveys or have some other means of determining what con-  
9 stitutes a competitive wage?

10 A Yes. Our policy is stated in our Policy Manual.  
11 We have a little publication that's called "Manual of Policies  
12 and Practices," which is distributed to all of our employees.  
13 And for over 30 years now we have had the policy, and we've  
14 tried to faithfully carry it out, where we would pay wages  
15 and salaries that compared favorably with the communities in  
16 which the work was being done, plus adjacent utilities.

17 Our Employee Relations makes telephone surveys  
18 every year. This is common in our industry. People don't  
19 send you written documentation. You have to take into account  
20 what time of the year you're talking about because different  
21 companies review their salary structures at different times  
22 of the year, some the first of the year, some the middle of  
23 the year, some in the fall. So you have to take that into  
24 account.

25 And we have, oh, at least a couple of hundred

WRB/eb6

1 classifications, maybe more. So you have to do this,  
2 classification by classification.

3 You have to compare your classifications. You  
4 have the classifications that have the same name but do not  
5 have the same work content, so you have to try to adjust for  
6 all of these things, and you find that certain classifications  
7 have fallen behind. Well, you take that into account and  
8 adjust accordingly to get back to where you feel like you  
9 should be.

10 You take into account where you're comparing are  
11 they going to reevaluate three months from now and go up?  
12 You take that kind of thing into account.

13 We have maintained a very favorable ratio in  
14 these areas.

15 Now this policy, to my knowledge, has only been  
16 suspended one time. This was suspended effective February 1,  
17 1974, because of what has already been alluded to here, that  
18 we did go into an earnings improvement program. It was in  
19 effect for two months, to the best of my recollection, two  
20 to three months, and then we resumed our normal policy.

21 The employees were informed that we were for the  
22 first time going to suspend it by Mr. Harris in a letter,  
23 and stated that as soon as we possibly could, we would; that  
24 it was strictly temporary and then we would revert back to  
25 the normal policy.

WRB/eb7

1 I believe at that time it was some 29 or 30  
2 years that we had followed this policy, and in about two to  
3 three months, something like that, we went back on it. And  
4 we've been on it ever since.

5 And each year in speaking to our employees --  
6 and I've had the opportunity to be in one meeting with them  
7 this year -- he pledged that we will continue to follow that  
8 policy.

9 Q Mr. Utley, let me direct the question to you next  
10 regarding the management organization at Brunswick.

11 Could you fairly briefly describe the nature of  
12 the reorganization among the Brunswick site management per-  
13 sonnel which occurred in 1976, and describe what you were  
14 trying to accomplish through this reorganization?

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1           A       (Witness Utley) Yes, I will.

2                   I'd like to go back to 1971 at the time we  
3 initially started staffing Brunswick, and at that time we  
4 placed a number of people in training in the BWR training for  
5 license on the Brunswick plant. Out of that, we licensed 26  
6 people.

7                   The organization was rather stable on up to April  
8 of 1975. At that time we recognized not only from our  
9 internal audits of our program, but also, as has been alluded  
10 to here in regard to the hearing, that we needed to reinforce  
11 our quality assurance program.

12                   So consequently we set up a quality assurance  
13 supervisor in April of 1975. That job was filled by a man  
14 that was filling a quality assurance position in our Raleigh  
15 office, and that was Mr. Starkey.

16                   In May of 1975, looking at the results that were  
17 being produced from the Brunswick organization in regard to  
18 the operation of the plant, we were not satisfied, as has  
19 been highlighted here in regard to reports from NRC, as well  
20 as our own internal observations.

21                   So consequently we set up a plant superintendent  
22 at the plant.

23                   Now, this just meant that we were adding in a  
24 level of management between the manager and the operating  
25 supervisor, and the maintenance supervisor, to better control

wel 2

1 the overall operation of the plant.

2 This man was placed in this position. He had left  
3 a position in our Raleigh office where he was functioning in  
4 a technical services organization, and had been directly  
5 involved in regard to the work that was taking place at the  
6 Brunswick plant.

7 Now, up until this point in time there had been  
8 very few changes at Brunswick. However, we, as a management  
9 organization, top management, were not satisfied with the  
10 operation of the Brunswick plant. There were things that  
11 were not meeting our standards, so to speak.

12 However, this is not to say that as we made evalu-  
13 ations and comparisons that this plant did not measure up to  
14 an average operation.

15 But we in CP&L do not accept average as being  
16 satisfactory, really. So we at this time were also looking  
17 at what changes we needed to make to give better control to  
18 this operation.

19 So we, in turn, took a man that had demonstrated  
20 management capabilities who was located in the general office  
21 in Raleigh, who had been a plant manager, who had been an  
22 operating supervisor, who had held a senior reactor operators  
23 license at our Robinson plant, and placed him as manager of  
24 the Brunswick plant. This was in May of 1976.

25 Now, we made this change knowing that this man was

1 not going to stay in this position. We made it strictly on  
2 the basis that he would stay there until such time as we were  
3 satisfied that we had a good solid sound individual trained  
4 and ready to take his place.

5 Now, when he went there as manager, we also made  
6 other changes that strengthened the organization, and in no  
7 way took away from the experience of the people that were at  
8 Brunswick.

9 We set up a startup superintendent. Now, this was  
10 a reclassification from a plant superintendent to a startup  
11 superintendent. We also set up a second superintendent,  
12 technical administration. We also set up an operating mainten-  
13 ance superintendent. And these are three superintendent level  
14 jobs inserted right under the plant manager, to give better  
15 management control to that organization.

16 Now, we filled one of those superintendent jobs  
17 with a man that was heading up quality assurance, because we  
18 felt strongly that we needed improvements in quality  
19 assurance, and we felt we needed also a man that had background  
20 in quality assurance in a higher management position. And  
21 this man was put in, and that was Mr. Starkey, who is  
22 present here.

23 Also Mr. Tollison was moved from our Robinson  
24 plant to our Brunswick plant.

25 Now, let's take a look at what his qualifications

1 were:

2 He held an SRO at Robinson. He had experience as  
3 an operating supervisor at Robinson, as an engineering super-  
4 visor at Robinson, as a maintenance supervisor at Robinson.  
5 Prior to that he functioned in an engineering capacity at  
6 Robinson, and prior to that he functioned in a Navy nuclear  
7 submarine program for some six years, after getting a degree  
8 in chemical engineering from the University of South Carolina.

9 He had demonstrated in these positions that he had  
10 good management capabilities. We brought him to Brunswick in  
11 a superintendent's job, where he functioned and demonstrated  
12 that he had the capabilities to know and manage the Brunswick  
13 plant.

14 Once we were convinced that this was the case, we  
15 put him in as manager of the Brunswick plant, and we moved  
16 Mr. Furr back to the Raleigh general office, still being in  
17 line management in our nuclear program.

18 Now, this was all in an effort to strengthen  
19 management at Brunswick.

20 Now, of course, when we moved Mr. Tollison over  
21 in May, then he was there from May until December, and it was  
22 at this time, like I say, when we were convinced that he had  
23 the capability to fill this job.

24 So, in December we moved Mr. Furr out, we moved  
25 Mr. Tollison up to plant manager, and we made the other moves

1 that were appropriate in regard to this change. And in no  
2 way did we take away from the management capability that  
3 prevailed at the Brunswick plant in making these moves.  
4 Everything was directed to strengthen the management.

5 Now, I can visualize and appreciate the viewpoint  
6 that somebody might have that was not in a management position  
7 to see the overall implications, and have the advantage that  
8 we have from the position we're looking at the overall  
9 operation, versus somebody down there that's making inspections  
10 and conscientiously, in my opinion, reporting the way they  
11 saw things.

12 But this is the viewpoint from an overall manage-  
13 ment position, and it was definitely to strengthen management.

14 Now, in November of 1977 we placed Mr. Starkey  
15 over at our Robinson plant as manager. All of this broadened  
16 Mr. Starkey in regard to his management capabilities in  
17 looking toward the future.

18 The man we put in Mr. Starkey's position has a  
19 very strong background and experience in the operation and  
20 maintenance of not only power plants, but he had some six  
21 or seven years experience at Newport News in the nuclear  
22 program.

23 So all of these moves have been directed to  
24 strengthen our management at Brunswick, and I think the  
25 bottom line is what kind of results are coming out of the

1 operations at Brunswick as a result of these changes, and I  
2 think it's been supported in the testimony that's been  
3 presented here that management has taken proper action, they  
4 have made corrections to weak areas, improvements are taking  
5 place, and we do have a better operation at Brunswick. It's  
6 still not where we want it, but it will be where we want it.  
7 We know we've got the right man managing Brunswick at this  
8 time. We know we've got the right man managing the Robinson  
9 plant at this time.

10 I think and I feel convinced of this, that NRC  
11 is going to continue to see improvements in respect to the  
12 operations of both of our nuclear plants, and we will  
13 certainly have the capability to move on in Harris.

14 Q Mr. Banks, let me address next a few questions to  
15 you.

16 First, let me ask you if you have any further  
17 corrections that you would like to make to your prefiled  
18 testimony as a result of some conferring with the NRC Staff?

19 A (Witness Banks) Yes, I would make a correction.

20 I'd like to make a correction on page 61 of the  
21 prefiled testimony.

22 After conferring with NRC individuals in I&E, I  
23 realized that we continued to have different numbers under  
24 LERS, and we tried to get our staffs together to find out  
25 why we had different numbers. And we are now in agreement,

wel 7 1

and I would like to correct ours for both Brunswick 1 and 2,  
2 so that we are talking the same thing.

3 There are many fundamental reasons for the differ-  
4 ence in numbers. We were not counting environmental tech  
5 specs; they were counting environmental tech specs LERs. Some  
6 were mathematic errors by individuals.

7 So if we take Brunswick Number 1 for 1976, that  
8 number should be 13.

9 For Brunswick Number 2, that number 150 should be  
10 166.

11 The year 1977, under Brunswick Number 2, the 70  
12 should be 71.

13 In 1978, Brunswick Number 1, the 105 should be 96.

14 Brunswick Number 2, the 88 should be 84.

15 CHAIRMAN SMITH: The latter changes being the  
16 mathematical errors that you referred to?

17 WITNESS BANKS: That's correct.

18 CHAIRMAN SMITH: No change in 1977 for Brunswick 1?

19 WITNESS BANKS: No change in 1977 -- well, so far  
20 as Unit Number 1.

21 No change in 1975 for either unit.

22 BY MR. JONES:

23 Q Mr. Banks, in an order prior to the hearing the  
24 Board requested that we made available to them materials in  
25 our orientation program for new employees relative to the

wel 8

1 corporate quality assurance program, corporate health  
2 physics program, and corporate nuclear safety program.

3 I believe that they specifically asked for any  
4 materials that we'd provide to the employees, or any handouts  
5 that we have.

6 I have copies of a document entitled, "Corporate  
7 Quality Assurance Program Policy Statement;" "Corporate  
8 Nuclear Safety Policy;" and "Corporate Health Physics Policy."

9 I will show you a copy of each of these documents  
10 and ask you if these are documents contained in our  
11 orientation manual for new employees at the Brunswick plant,  
12 and if these are the documents that are physically distributed  
13 to employees at the plant.

14 MR. JONES: Mr. Chairman, we have previously  
15 distributed these policy statements, and I would like to ask  
16 that the document entitled, "Corporate Quality Assurance  
17 Program, Policy Statement," be identified as Applicant's  
18 Exhibit MM.

19 (CP&L document, "Corporate Quality  
20 Assurance Program, Policy State-  
21 ment" was marked for identifica-  
22 tion as Applicant's Exhibit MM.)

23 I would ask that the document, "Corporate Nuclear  
24 Safety Policy," be identified as Applicant's Exhibit NN.

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(CP&L document, "Corporate Nuclear Safety Policy," was marked for identification as Applicant's Exhibit NN.)

I would ask that the document, "Corporate Health Physics Policy," be identified as Applicant's Exhibit OO.

(CP&L document, "Corporate Health Physics Policy," was marked for identification as Applicant's Exhibit OO.)

BY MR. JONES:

Q Mr. Banks, I ask you if you recognize these documents and if, in fact, they are the documents that we hand out to our employees?

A (Witness Banks) Those are the documents that we do provide to each of the new employees at the plant at the time of orientation.

MR. JONES: Mr. Chairman, I would move the admission and receipt of these documents as exhibits into evidence.

CHAIRMAN SMITH: So received.

(The documents heretofore marked for identification as Applicant's Exhibits MM, NN and OO were received in evidence.)

wel 10

1 BY MR. JONES:

2 Q Mr. Banks, could you now briefly describe how, in  
3 addition to making these policy statements available to new  
4 employees at the nuclear plants, we provide additional initial  
5 training in the areas of health physics, quality assurance,  
6 and nuclear safety?

7 A (Witness Banks) Yes. Each new employee at the  
8 Brunswick and Robinson plants participates in a structured  
9 orientation program. The objects of this program are to  
10 familiarize each new employee with overall Company goals,  
11 policies and activities, as well as it provides a new  
12 employee with new information that will enable him to function  
13 more effectively in their work assignments.

14 In the generation department, in which these  
15 nuclear plants are located, all employees spend a minimum  
16 of two weeks in the initial phase of an orientation program.  
17 The professional employees spend an additional two to three  
18 months rotating through and becoming familiar with other  
19 areas related to their job positions.

20 The initial two-week phase of the orientation  
21 program is the same for all employees. Typically, items  
22 covered with each employee during the first two weeks are  
23 the corporate positions on health physics, quality assurance  
24 and nuclear safety. Each new employee is given copies of  
25 these policies, in addition to receiving and having the

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opportunity to discuss these policies. All new employees spend approximately one day in a health physics training program, and approximately one day in a quality assurance training program.

WEL2

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1 CHAIRMAN SMITH: Let me ask about this. How much  
2 time-- Or what efforts are made to assure that the employees  
3 actually are cognizant of these documents? Is that included  
4 in the --

5 WITNESS BANKS: As I stated on the health physics,  
6 they spend a full day with people in health physics. They  
7 have an opportunity to talk and discuss about it. The same  
8 with quality assurance.

9 CHAIRMAN SMITH: Including corporate policy?

10 WITNESS BANKS: Right. They already have those  
11 at the time that they spend it at that period with these  
12 individuals. They can talk in details about them.

13 CHAIRMAN SMITH: Then you did not mention the  
14 time spent on corporate nuclear safety policies.

15 WITNESS BANKS: The over-all program covers the  
16 corporate nuclear safety. There is no specific program where  
17 one individual can talk about nuclear safety as such. We  
18 feel the whole program is nuclear safety.

19 DR. LEEDS: Do you actually go through the policy  
20 statements with them or-- I've been in courses where you  
21 get handed a rather thick document and sometimes things like  
22 this are sort of omitted. It's like forewords to textbooks  
23 in a university. You know, they tell you a lot of things  
24 and students never read them.

25 WITNESS BANKS: Dr. Leeds, it is handed to them

WEL/eb2

1 as part of their orientation information. But that is the  
2 reason in these particular areas that we take the extra time  
3 where they actually meet and talk with individuals that work  
4 in these areas.

5 So at that time it's reemphasized that we do have  
6 these, and they get down to the nitty-gritty of what's taking  
7 place.

8 CHAIRMAN SMITH: These exhibits, MM through OO,  
9 are not designed particularly for training. These are the  
10 actual expressions of corporate policy?

11 WITNESS BANKS: That is correct.

12 CHAIRMAN SMITH: All right. But you're giving  
13 those to us in response to the inquiry, what handouts, and  
14 these are handouts. Right, we asked for these.

15 But as far as specific training on policy, this  
16 I think is probably-- I just assumed that you had training  
17 in the general areas of health physics and nuclear safety  
18 and quality assurance, but the actual methods by which the  
19 corporate policy and corporate expectations of your employees--  
20 Does it go beyond just handing out these documents?

21 WITNESS BANKS: Mr. Chairman, I feel that when we  
22 are giving them what the established program is at the plant  
23 and we show them that this program is supported by corporate  
24 management, that this is emphasizing the import of the program.

25 CHAIRMAN SMITH: The corporate policy

WEL/eb3

1 pervades your entire training program?

2 WITNESS BANKS: That's correct.

3 BY MR. JOHNSON:

4 Q Mr. Banks, are you ready for your turn on the  
5 HPCI door alarms?

6 A (Witness Banks) I'm not ready but I'll take it.

7 (Laughter.)

8 Q Would you first, from your perspective, run  
9 through the history of the HPCI door problem and in the  
10 process, if you like, or separately, I'll ask you another  
11 question directed towards how the company has gone about  
12 establishing priorities relative to the ultimate solution of  
13 the HPCI door issue.

14 A I don't think it would help to go back through  
15 all the dates of where the infractions came in, where the  
16 concerns came in, as identified in our testimony. These  
17 items that are identified at the plant by the inspectors are  
18 brought to my attention through inspection reports, through  
19 my daily contact with the plant managers.

20 This item was not an unusual item as far as doors  
21 being opened. We were going to-- In upgrading the security  
22 system we were having problems with doors and the security  
23 system. We are not talking about a door to a room. We're  
24 talking about massive, heavy, water-tight doors with dogs  
25 on, with signs at that door that tells an individual that

WEL/eb4

1 if you hear the alarm you have to get out of this room be-  
2 cause there is a halogen system that is going to emit in 15  
3 seconds.

4 So if you're in that room working and that door  
5 is shut, you're looking at a big, massive door. He's got  
6 some concerns, and you're talking about laborers that are  
7 down there doing janitorial work; this type of thing.

8 So yes, we gave them instructions. We posted  
9 the doors, found out that that didn't work. So we were not  
10 putting on a high priority because we had many other, what  
11 we considered more significant items to be concerned with,  
12 and manpower to be used.

13 We come down to the time that after we went  
14 through the administrative controls that would not work, we  
15 were going to evaluate and put in new fire protection re-  
16 quirements.

17 Now why take so long to put these alarms in,  
18 from '77 until the last one went off two weeks ago? This  
19 fire protection modification that they become part of for  
20 the Brunswick plant is a \$4.5 million project. It is a  
21 massive construction project of putting alarms on doors,  
22 putting in dedicated shutdown systems, putting in stand  
23 pipes, putting in new sprinkler systems.

24 We are not able to just walk in and make a modi-  
25 fication. We have to get an engineering review of it. We

WEL/eb5 1 have to have a plant modification. It has to be reviewed by  
2 the Plant Nuclear Safety Committee. Otherwise we're going  
3 to get infractions.

4 These doors are located at the minus 17-foot  
5 level. It's the basement of the plant. You can't go any  
6 lower. At that level our drain swamps, when they are pumping  
7 water, give an indication in a radiation control room that  
8 these pumps are operating and there is water down in that  
9 area.

10 If these pumps operate too often or too continuous  
11 there's another alarm that will go to the control room to  
12 tell the reactor operator that there is an excessive amount  
13 of water coming into these areas. So these areas were not  
14 unprotected, based on flooding. We had indications in those  
15 areas.

16 To run the cable and the conduit from these  
17 particular doors we're talking-- I didn't go back and check  
18 the modification, but just from the locations -- over 1,000  
19 feet for each cable run, going through concrete walls, going  
20 through secondary containment in the reactor building which  
21 can only be done when the reactor is shut down.

22 So there are concerns about it but when you put  
23 it in perspective with the many other things that were taking  
24 place, administrative control we had, I felt we were taking  
25 proper actions for it with the administrative control we had.



WEL/eb6

1 Q From a safety standpoint, Mr. Banks, was it the  
2 plant's opinion, based upon some reasoned consideration,  
3 that in terms of relative priorities that there were other  
4 backup systems that would serve the function of the door?

5 I'm really trying to understand for sure why it  
6 was that you didn't feel that it was necessary to give this  
7 particular item the highest priority and fit an alarm in  
8 within a couple of months after you decided that it should be  
9 done.

10 A As identified, we already had flooding-type  
11 alarms down there that were used for telling us how much  
12 water was in this area, so the operators knew what was down  
13 there. We were getting a snift inspection down there, so if  
14 there was flooding down there, the biggest problem would be  
15 that it would create a limiting condition of operating condi-  
16 tions required to shut down the plant.

17 It was more of an economical loss to the company  
18 than it would have been a nuclear safety loss.

19 Q Is it your feeling that the administrative con-  
20 trols have functioned as they were supposed to, although not  
21 necessarily foolproof? An alarm in itself I guess would not  
22 prevent the door from being left open. But have the adminis-  
23 trative controls been followed?

24 A To the best of my knoweldge they have been.

25 Q Turning next to a separate problem, the augmented

WEL/eb7 1 offgas issue, could you please describe something of the  
2 history of the plant's involvement with the augmented offgas  
3 system and, particularly, the current plans for modification  
4 or repair of the augmented offgas system?

5 A Yes, I can.

6 What I would like to do-- I believe you have a  
7 sketch there of this augmented offgas system, and I would  
8 like the Chairman and Dr. Leeds to have it. They may better  
9 understand what we're talking about.

10 (Documents distributed to the Board.)

11 I think there has been a lot of discussion about  
12 the offgas system and the augmented offgas system. And I'm  
13 not sure people appreciate what we're talking about some-  
14 times.

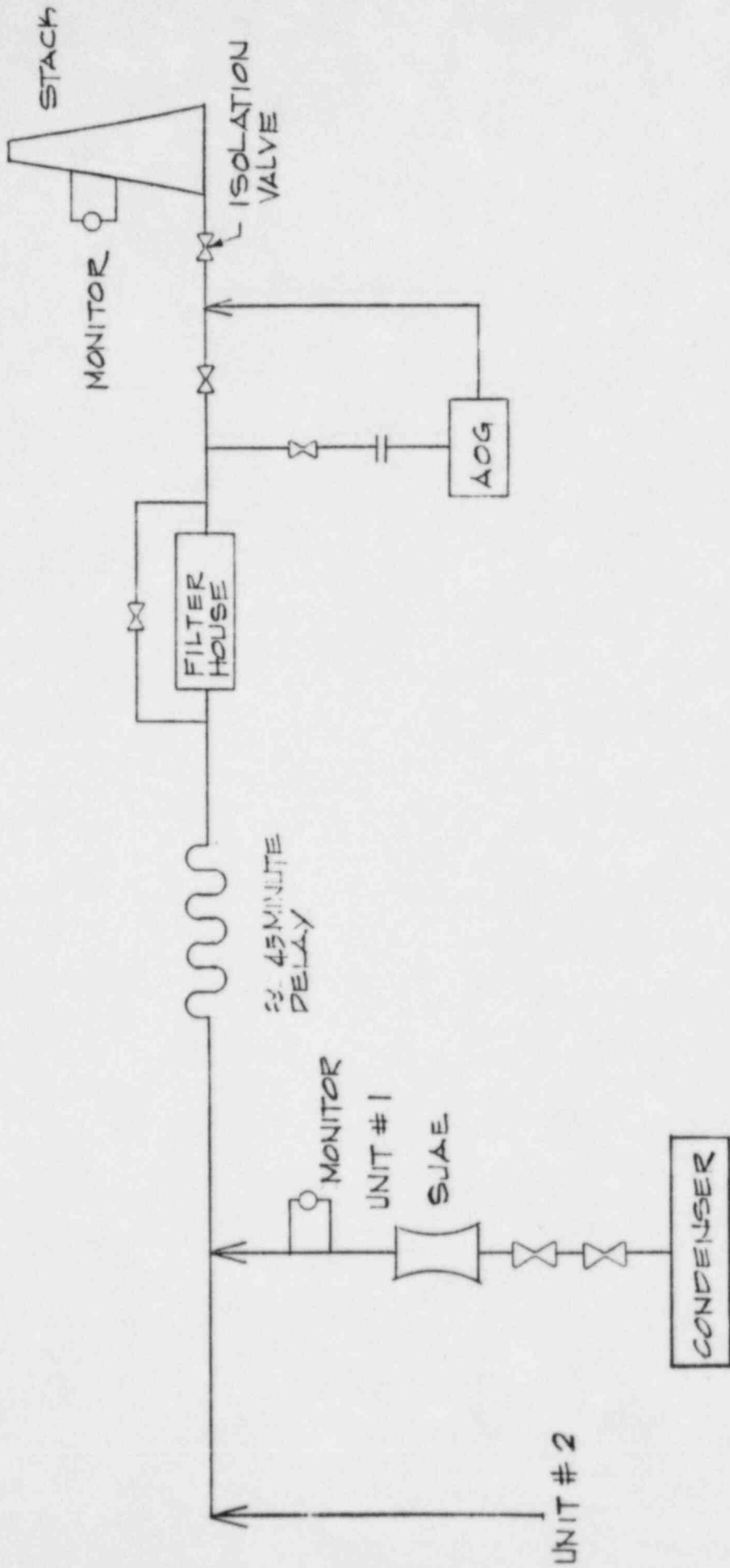
15 MR. JONES: Mr. Chairman, would it be appropriate  
16 to have this figure identified as Applicant's Exhibit TT?

17 CHAIRMAN SMITH: Yes, it would. But when it comes  
18 time to read the testimony, it really is convenient to have  
19 it bound into the transcript.

20 MR. JONES: That's fine if it's acceptable to  
21 everybody. I think you're right.

22 CHAIRMAN SMITH: All right, let's do that. Let's  
23 bind into the transcript at this point the Brunswick offgas  
24 chart.

25 (The document follows:)



BRUNSWICK'S OFF GAS

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BY MR. JONES:

Q Would you proceed, Mr. Banks?

A (Witness Banks) As you'll notice on the sketch in front of you-- I'll give a little explanation of what's there.

We've got Unit Number 1 and Unit Number 2 main condensers, and from those main condensers we have the steam-jet air ejector, SJAE. Those are the steam-air ejectors that pull the noncondensable gases out of the condensers when the units are operating.

The monitors that we show there are located on both units. Those are radiation monitors that measure the amount of activity passing those points. It goes into the combined piping system.

The piping system is underground. It just circles around underground to assure delay time. It was designed for 30 minutes actual delay time, and it turned out to be from 45 to 47 minutes in actual operation.

After it passes through the underground piping it gets a delay to allow for decay of short-lived activity. It passes through the filter house and from there it goes into the stack and is discharged from the plant.

As noticed, there is also a monitor on the stack that is used for identifying the activity that actually goes up the stack.

WEL/eb91

1 At the filter house, that is where the explosion  
2 took place that was discussed earlier in the testimony.

3 As can be seen, I haven't talked about the  
4 augmented offgas system because that has no bearing upon this  
5 situation. It was a hydrogen buildup in that building.  
6 There was a spark from electrical equipment and the hydrogen  
7 exploded in that building. That was put back into operation  
8 in just a matter of a few days, and everything was back to  
9 normal as far as normal operation.

10 Now we get to the augmented offgas system which  
11 is the AOG.

12 At this period of time the AOG system was blanked  
13 out. It was not even in operation. The flanges there were  
14 in place. The system had not been operating.

15 To give some background on that AOG system,  
16 the AOG system was an after-original-design change to the  
17 plant. When the proposed Appendix I came out in 1971 and  
18 it looked like the requirements of proposed Appendix I were  
19 going to be required as an actual requirement on the plant,  
20 we worked with our architect-engineers and put in there this  
21 augmented offgas system that was designed by Air Products.

22 Now the system had never been in operation in a  
23 plant of this size. We're talking about a new system, a  
24 new design, a new concept for this use.

25 The system was purchased and delivered in 1974

WEL/eb10

1 and 1975 to the plant. Unit 1 got their system equipment  
2 delivered in 1975. After completing the fabrication and  
3 installing the system, the preoperational test of the system--

4           There were many field changes that had to be  
5 made because while installing the system, there are many new  
6 designs and with the vendor making other checks, there were  
7 design problems with his system. So during the installation  
8 of it there were still modifications to be made within it.

9           So the preoperational test was completed on Unit  
10 No. 1 in December of '76, and in February of '77, it was  
11 completed on Unit No. 2.

12           The systems were tried to be put in operation with  
13 the gases coming out of the plant on March the 15th of '77,  
14 on April 7th of '77 and on August 31st of '77. Three dif-  
15 ferent times we tried to put the system into operation. Each  
16 time there was a detonation that took place of hydrogen in  
17 the offgas piping, and that flame would remain in the piping  
18 and move itself back up near the air ejector where you have  
19 the highest concentration of hydrogen.

20           The flame would sit there in the pipe and would  
21 burn until the time that the hydrogen was cut off by turning  
22 off the air ejector, or one of those type of methods.

23           So after these problems a decision was made and  
24 a study was done of possibly changing out the augmented  
25 offgas system with a new thermal recombiner. We worked with

1     Atomics International with our technical people to see if  
2     there was a concept design which they had used for some  
3     other purposes that would be feasible to put into our plant  
4     as a hydrogen recombiner, flame thermal recombiner, so that  
5     we would not have this problem in the augmented offgas system  
6     and it could work without having it.

7             We followed this through with them, and talked  
8     with them until June of '78, when it came to us that the  
9     cost of doing this, of getting the -- we'd already spent  
10    \$120,000 -- to actually build the system and install it  
11    would run \$3.5 to 5 million.

12            CHAIRMAN SMITH: The recombiner system?

13            WITNESS BANKS: Right, the recombiner system.

14            At that time, we had gone back to our technical  
15    people to reevaluate other types of recombiners. We feel now  
16    that we will not go to the thermal recombiner. It had many  
17    good looking things, but dollar-wise it's not feasible to  
18    spend that kind of money for the final results. We can build  
19    a whole new system for that kind of money.

20            So there are on the market other types of  
21    recombiners which we feel will do the job, and in the  
22    process of talking to those technical people in the plants  
23    that have some in operation, we are committed now to go back  
24    to the Commission with what we will do by the first of  
25    April, which will be other than a thermal recombiner. That

wel 2

1 we know for sure. We will give them our schedule on May 1  
2 of 1979, and we will give them a technical description on  
3 August 1 of 1979.

4 A preliminary investigation indicates that we will  
5 have the equipment delivered and be able to install it during  
6 the refueling outage in 1981.

7 CHAIRMAN SMITH: Would this be an appropriate time  
8 for me to ask some questions about the technical aspects of  
9 this?

10 MR. JONES: Pardon?

11 CHAIRMAN SMITH: Would this be a good time for me  
12 to ask about some of the technical aspects?

13 MR. JONES: Yes, I would think so.

14 CHAIRMAN SMITH: Of course, I understand it  
15 perfectly, but there may be some members of the public that  
16 don't know what these little bow ties are on the chart.

17 (Laughter.)

18 EXAMINATION BY THE BOARD

19 BY CHAIRMAN SMITH:

20 Q As I understand it, the hydrogen which exploded and  
21 later was allowed to burn, I learned yesterday was as a result  
22 of disassociation of the hydrogen atoms from the oxygen atoms  
23 in steam in the condensing phase.

24 A (Witness Banks) That's a major contributor. We  
25 also have air in-leakage which adds some to it.



WEL/mpbl  
flws  
we12

1 Q And this is at the point where the steam has  
2 come into the turbine room? I thought of the reactor where  
3 it disassociates and where the air gets into it.

4 A That's correct.

5 Q Now, how would this differ from a problem which  
6 would be caused by a fossil plant at this point?

7 A The difference here between a fossil plant or a  
8 pressurized water plant, gee, is that you do not have the  
9 disassociation that takes place in the reactor coming into  
10 the condenser.

11 As far as the function and what the air ejector  
12 does, that's the same at all steam plants.

13 Q But you don't have the disassociation?

14 A That's correct.

15 Q And it's because it's a boiling water plant that  
16 you have it here?

17 A That is correct.

18 Q Okay.

19 Now, how does the radioactivity get into the  
20 hydrogen?

21 A What we have is activation that takes place  
22 from the water passing through the core region of the reactor,  
23 plus we have possible corrosion products that could be  
24 carried over. And we also have fuel leakage where there  
25 are some noble gases that would leak out of the fuel, or it

WEL/mpb2

1 may be some what we call in-fuel fabrication on the surfaces  
2 and near the surfaces. There are some impurities that are  
3 left. These get fissioned, and they are part of the back-  
4 ground that you receive out of the core. And these pass  
5 over with the steam as noble gases and few particulates,  
6 and they are pulled out of the condenser by the air ejector  
7 and pass through this area.

end  
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WRBloom/wbl1  
pls WELandon

1 Q And this contamination of the steam is anticipated  
2 in the design of the plant?

3 A That is correct.

4 Q One final question. So then the filter house  
5 where there was the explosion, this is even farther removed  
6 from the actual reactor containment?

7 A That's correct. None of this-- The augmented  
8 offgas system and the filter houses are out by the stack area.  
9 They are not located in the reactor building.

10 Q You have the-- First you have, between the  
11 reactor you have -- and the explosion, you have the turbine  
12 room. Then further removed is the filter house where the  
13 explosion took place?

14 A Physically the location was-- That's not the case.  
15 Schematically-wise, yes, on the system. But not on physical  
16 location of buildings.

17 DIRECT EXAMINATION (Resumed)

18 BY MR. JONES:

19 Q I have one further question on the augmented  
20 offgas issue. Do you know where the eight-year estimate  
21 came from, or do you recall whether CP&L ever said to the NRC  
22 that it would take eight years to modify the augmented off-  
23 gas system?

24 A (Witness Banks) I have no personal knowledge of  
25 where it came from. I have talked with I&E Atlanta, and I think

XZXZXZX

WRB/wb2

1 their response yesterday of how it came about is probably  
2 where it came. Because their inspectors were talking to the  
3 people at our plant, and at the time they went to Washington  
4 they were talking of two to five years to get the thing  
5 resolved.

6 Q Now I have one final and fairly quick question  
7 for you on the diesel generators.

8 Could you explain why, in the plant's opinion,  
9 it was necessary to obtain special bottles for sampling  
10 the oil in the diesel generators, particularly 3 and 4?

11 A Yes. And I think we have to back up there to  
12 decide why we called Mobil. Mobil lubricants-- we have a  
13 contract with the Mobil Company that they provide us a survey  
14 of our plant of all the lubricants that we use in our plant.  
15 They run the analysis on our oil for us. They make all the  
16 recommendations as to what we do with lubricants for our  
17 major equipment at the Brunswick plant.

18 So the lubrications that we used, the decisions  
19 that we make are based on recommendations that we get from  
20 Mobil Oil.

21 So this is the reason we use their sample bottles.  
22 We don't go down and grab ours which may have some contamin-  
23 ation or something in them. They provide the sample bottles  
24 that fit into their system to do the analysis that they want  
25 to do on all the oil that we have.

WRB/wb3

1                   So in this particular case when we discussed the  
2 diesel problem with them they wanted to take the normal  
3 samples and run a total analysis on the oil, as well as  
4 the concern of the fuel oil.

5                   We discussed the fuel oil with them. Our people  
6 searched the records and felt comfortable of how much went  
7 in them. On the one diesel we were able to determine from  
8 previous records that there had been approximately 110 gallons  
9 put in there.

10                   We have to keep in mind that the capacity of  
11 this oil system is, it's a 1000-gallon oil system.

12                   On the other one we put in about 55 gallons.

13                   If you put that in perspective, if you took  
14 half a pint of kerosene and dumped it in the crankcase of  
15 your car right now, you could drive your car to California  
16 and back and I don't think you would have any problem with it.  
17 Because when I was young and raised in the country, in the  
18 wintertime up north we used to do that to our cars to be able  
19 to start them in the morning.

20                   CHAIRMAN SMITH: Well that amount of dilution  
21 and reduction of viscosity would be within the changes that  
22 are normally attendant to temperature changes?

23                   WITNESS BANKS: Yes, it would be. And it would  
24 also be due to the fact that on diesel engines, in their  
25 design there's a normal amount of fuel oil that does leak

WRB/wb4 1

into the oil systems. That's why you have to periodically  
2 sample them.

3

CHAIRMAN SMITH: But with the need for the  
4 sampling bottles, wasn't Mobil indicating that the problem  
5 would go beyond just viscosity?

6

WITNESS BANKS: They were saying it's best to make  
7 sure there's not something beyond viscosity.

8

BY MR. JONES:

9

Q Mr. Banks, I said that would be the last one.

10

Let me renege and do one more.

11

When you received the HPCI tech spec change on  
12 the delta-T question, did that tech spec change require  
13 immediate action on its face?

14

A (Witness Banks) No, that tech spec change would  
15 not have required immediate action, as you look at it.  
16 Because what it was doing was taking something out of the  
17 tech spec, eliminating something. And whether we did something  
18 extra or not, that is what we are allowed to do beyond  
19 the regulations.

20

Also, I'd like to reclarify something else from  
21 yesterday that I heard. It was stated that it was easy to  
22 go down and take off a couple of wires, and that would have  
23 ended it. I can say this: that I know quite a few I&E  
24 inspectors, and if I went down at any time on any system  
25 and took off a couple of wires where I hadn't had an

WRB/wb5

1 engineering review of it, and if it was a modification and  
2 I didn't have a Plant Nuclear Safety review of it and  
3 actually had it documented in a modification package, I  
4 would have two or three more infractions given against me.

5 Q Mr. McDuffie,--

6 CHAIRMAN SMITH: Did you understand Mr. Cantrell  
7 to say that he would have thought that would be possible  
8 without those preliminary safeguards, or preliminary pre-  
9 cautions?

10 WITNESS BANKS: I think it could have been inter-  
11 preted that way.

12 BY MR. JONES:

13 Q Mr. McDuffie, a question came up earlier in the  
14 hearing relative to the cost of the site preparation work  
15 performed under the original exemption prior to the issuance  
16 of the construction permit.

17 Have you had a chance to check your records, and  
18 can you provide some further explanation of the basis for  
19 the original estimate of 4.5 million dollars as the cost of  
20 pre-CP work which was scheduled to be done under the exemption?

21 A (Witness McDuffie) Yes. I have the money that  
22 was spent during that period and until we received the CP.

23 In late 1973, from my informal discussions  
24 with the NRC it became apparent that we would not get our  
25 construction permit until -- at that time we were estimating

WRB/wb6

1 the middle of 1974. And there were certain site activities  
2 that could be accomplished and were not safety-related.  
3 So we asked for permission, or an exemption to perform some  
4 of these jobs that would have helped the schedule later on.

5 We estimated that the work would cost \$4,550,000  
6 and that none of these activities would be completed during  
7 the six months but would reach the point that it would help  
8 us later.

9 During the period January 1974 to June of '74 we  
10 spent \$4,579,000 on these exemption items.

11 Now we did not get the permit at that time, and  
12 later in the year the hearing was stopped, the licensing  
13 process stopped. But we had to stay at the site from then  
14 until the permit was received in '78. And some of the  
15 exemption items were continued. And actually we spent  
16 \$9.4 million on these exemption items from June of '74 until  
17 the permit was received last January.

18 CHAIRMAN SMITH: What was the figure, sir?

19 WITNESS McDUFFIE: \$9.4 million.

20 Now, 3.1 million was spent, above the original  
21 estimate 3.1 million was spent for--

22 CHAIRMAN SMITH: This is 9.4 plus 4.5?

23 WITNESS McDUFFIE: Right; during the three and  
24 a half year period after the initial six months.

25 Now if we had started work at the end of six



WRB/wb7

1 months as originally had been planned, we would have started  
2 installing the equipment in the plant. But with everything  
3 shut down and material still being received, it was neces-  
4 sary to grade additional storage yards -nd build many ware-  
5 houses, some with humidity controls in them. And we spent  
6 3.1 million on construction of warehouses and storage  
7 facilities and things of that nature.

8 During the start in 1974 of the--

9 CHAIRMAN SMITH: I'm sorry; would you repeat  
10 that last statement, about the storage buildings?

11 WITNESS McDUFFIE: The storage buildings. During  
12 the three and a half year period we spent 3.1 million ad-  
13 ditional dollars on clearing and grading and constructing  
14 our warehouses to store the material that was being received.

15 CHAIRMAN SMITH: Okay. Now that is in addition  
16 to the 9.4?

17 WITNESS McDUFFIE: No; I'm now giving you a break-  
18 down of the 9.4.

19 CHAIRMAN SMITH: All right.

20 Would you regard that 3.1 as being a part of the--  
21 This was temporary storage?

22 WITNESS McDUFFIE: Yes. Storage and protection  
23 for the equipment. You see, at the site we have material  
24 for two units.

25 CHAIRMAN SMITH: Yes. We've seen it.

WRB/wb8

1                   Would you regard this as being an activity that  
2 the company requires, that would either have to be under  
3 the exemption, or something the company could do with or  
4 without NRC approval?

5                   WITNESS McDUFFIE:   Certainly it was necessary  
6 that we protect the equipment. And the exemption had given  
7 us permission to construct warehouses.

8                   During the exemption, of course, we started  
9 excavating for the plant. And during the six months we were  
10 going to excavate just one quadrant so that we could get an  
11 early start on concrete when the permit was received. We  
12 had a contractor mobilized with a large force of equipment.  
13 So we did not stop excavation immediately when the job was  
14 rescheduled. We found a fault that ran through one corner  
15 of the excavation, and we wanted to continue excavating for  
16 the entire four units so that we could determine the extent  
17 of any geological problems. And this work caused an additional  
18 2.5 million dollars.

19                   Then in 1977 we resumed relocation of a main line  
20 railroad track which did run through the area where the main  
21 dam will be built. This had been covered in the exemption.  
22 And on the relocation of this railroad we spent 2.9 million.

23                   So during the time prior to receiving the permit  
24 we, of course, didn't do anything that was not covered by  
25 the exemption, but it did spread over four years instead of

WRB/wb9

1 the originally planned six months.

2 BY MR. JONES:

3 Q Mr. McDuffie, is it correct to say that the  
4 4.5 million dollar estimate originally made was for work that  
5 you anticipated doing in the six months that you thought was  
6 remaining prior to issuance of the construction permit?

7 A (Witness McDuffie) That's correct.

8 Q And at the time you made that estimate you  
9 assumed that the additional site work which was technically  
10 authorized under the exemption would be actually accomplished  
11 after you received the CP?

12 A That's right; based on receiving the CP in the  
13 summer of '74.

14 Q And when, in fact, the plant was delayed and  
15 the CP was not issued, then that enlarged the scope of the  
16 work that you could do under the exemption, or planned to  
17 do under the exemption, as opposed to under the CP?

18 A Very much. It certainly enlarged our warehousing  
19 requirement considerably.

20 DR. LEEDS: Mr. McDuffie, does the 3.1 million  
21 on warehouse construction include the laboratory and the  
22 training facilities?

23 WITNESS McDUFFIE: No, sir. This is money spent  
24 at the Shearon Harris plant site.

25 DR. LEEDS: Okay.

WRB/wb10

1 WITNESS McDUFFIE: Dr. Leeds, we've got over  
2 100 acres of storage out there.

3 DR. LEEDS: Yes, I saw that.

4 WITNESS McDUFFIE: This plant, when it was  
5 originally started, was going to be in operation in 1976,  
6 the first unit. Then it was changed to '77 by the time we  
7 had the exemption.

End 1C

8 DR. LEEDS: If I'm correct, you have all the  
9 equipment, all the major items of equipment and many of the  
10 smaller items of equipment for two units out at the site;  
11 is that correct?

12 WITNESS McDUFFIE: We have the vessels for the  
13 nuclear steam supply system stored at the site for two units.  
14 That's the reactor vessels and the sixteen generators, plus  
15 much of the auxiliary equipment.

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16 MR. JONES: Mr. Chairman, that concludes the  
17 direct examination of the witness, and they are available  
18 for cross-examination.

19 If I may, I would like to ask if we could take  
20 a short recess before we go into cross.

21 CHAIRMAN SMITH: Let's take a fifteen-minute  
22 recess.

23 (Recess)

24 CHAIRMAN SMITH: We're ready to proceed.

25 We'll begin with the Attorney-General, Mr. Erwin,

WRB/wb11

1 and then the Staff.

2 MR. GORDON: I have no cross-examination,  
3 Mr. Chairman.

4 CHAIRMAN SMITH: Mr. Erwin.

5 CROSS-EXAMINATION

6 BY MR. ERWIN:

7 Q Mr. Jones, in response to the other Mr. Jones'  
8 question this morning you discussed the earnings improvement  
9 program of 1974 that had been previously alluded to, and  
10 the suspension of -- and you said your policy of paying  
11 competitive wages, which had been in effect for thirty  
12 year prior, was suspended on that occasion; is that correct?

13 A (Witness Jones) That's correct.

14 Q Now the policy had been in effect since the early  
15 forties; is that right?

16 A That's my understanding. It was started before  
17 my time. It was in effect when I came to the company in  
18 1951.

19 Q After the great depression of the thirties?

20 A Oh, yes.

21 Q And you have no knowledge as to whether any  
22 such....

23 Describe what the effect of the earnings improve-  
24 ment program was on the wage scale of the CP&L.

25 A Well as a part of that, on I believe it was

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WRB/wb12 1

2 February 1st, 1974, I believe it was, or '75, there was a  
3 salary cut instituted completely across the company, 5 percent  
4 except for the sixteen top executives: they took a temporary  
5 10 percent salary cut. This was in effect for three or  
6 four months before it was restored. And this was when we  
7 suspended the policy, temporarily suspended the policy on  
8 salaries and wages.

9 Q But the earnings improvement program itself was  
10 a larger program?

11 A Oh, yes. This was a minor part of that. The  
12 earnings improvement program had started earlier than this.  
13 And was when we didn't get the action we needed from one  
14 of our retail rate cases that we had to resort to this.  
15 This was sort of the last thing, we left this to the last.

16 Q In other words, you were suffering from you all  
17 describe as regulatory lag; is that right?

18 A This is correct.

19 Q And so what you did was undertake this earnings  
20 improvement program, including the suspension of the -- the  
21 reduction in wages, so that -- you know, you reduced wages  
22 and did other things in the earnings improvement program so  
23 that you could continue to pay common stock dividends; is  
24 that correct?

25 When you say "earnings," you mean earnings  
distributable to common shareholders?

WRB/wbl3

1           A       Well we did continue to pay dividends during  
2 this period. --if that is the question; if that's responsive  
3 to your question.

4           Q       All I'm trying to establish is the purpose of  
5 the earnings improvement program. The title would lead one  
6 to believe that the purpose was to continue to pay common  
7 stock dividends, would it not?

8           A       It was to show to the financial community that  
9 we were sound, that we could pull out of a temporary situation  
10 like this. Because we did have a big financial program, we  
11 had to construct these plants; certainly.

12          Q       All right. But this was not only-- Was there  
13 a time during the period in question in which your operating  
14 revenues, as shown in your annual statements, did not equal  
15 your operating expenses? Do you remember?

16          A       I'd better not answer that. Because, you know,  
17 this is not my area. It's probably a matter of record, I'm  
18 sure.

19          Q       But the decision was made on the part of manage-  
20 ment to cut salaries at this time, rather than to fail to  
21 pay common stock dividends? In other words, you did cut  
22 salaries, but you did not -- and you continued to pay common  
23 stock dividends?

24          A       We did continue to pay dividends. The dividends  
25 was not increased during this period, but we did continue to

WRB/wbl4

1 pay them.

2           Could I add: If we had to do the decision again  
3 it would be the same. Because the worst thing that could  
4 happen is to cut out the dividend. One company almost  
5 wrecked the industry one time in doing that, and it could  
6 have taken other means, in our opinion.

7           Q       You're referring to Consolidated Edison?

8           A       Yes, sir. I don't think the utility industry has  
9 recovered yet from that.

10          Q       And that was in the spring of 1974, was it not?

11          A       I couldn't tell you the date.

12          Q       Now that was my next question: If you should  
13 encounter a similar period of financial difficulty, a similar  
14 period of economic recession, a similar period of -- what  
15 shall we say? -- regulatory lag, inflation outpacing your  
16 rate increases, you would do exactly the same thing?

17          A       Well if all the situation was identical -- which  
18 it will never be identical again -- if the decision was left  
19 to me that's exactly what I would propose to do. But you  
20 would never encounter exactly the same situation again.  
21 And I can't project what the situation might be.

22                 But you take a look at everything, and then you  
23 make -- management tries to make a prudent judgment in view  
24 of those circumstances. And I certainly cannot sit here and  
25 project what we may do when I don't know all the situation.



WRB/wb15

1 Q All right. But the worst thing in your mind  
2 is to fail to pay a dividend?

3 A No, I did not say that.

4 Q You didn't say the worst thing would be to fail  
5 to pay a dividend?

6 A I don't recall having said that was the worst  
7 thing that could happen. Maybe I did. If I did, it's a  
8 very serious thing. And I think when there's other means  
9 available to you, certainly that that's right at the bottom  
10 of the totem pole in my opinion.

11 This is just my opinion. I'm no expert in the  
12 financial area: now remember this.

13 Q I'm sorry, Mr. Jones, but I overheard you just a  
14 moment ago to say the worst thing to do would be to fail to  
15 pay a dividend.

16 A Well I said one of the worst things in my  
17 opinion would be that . Because I think it would have long  
18 time detrimental effects.

19 CHAIRMAN SMITH: He was speaking in the context  
20 of demonstrating to the financial community.

21 WITNESS JONES: This is correct.

22 MR. ERWIN: Mr. Chairman, in the context of--

23 CHAIRMAN SMITH: I don't want to interfere. You  
24 go ahead.

25 MR. ERWIN: In the context in which I asked the

WRB/wbl6 1

question it was the decision to cut salaries in order to  
2 pay dividends.

3

CHAIRMAN SMITH: Okay.

4

MR. ERWIN: And I think he--

5

CHAIRMAN SMITH: Okay. You're pursuing a course  
6 of cross-examination that I don't have any quarrel with.  
7 I just want the questions to be clear and the answers to be  
8 clear.

9

MR. ERWIN: I do, too. And that's why I inquired  
10 again of Mr. Jones as to whether or not he remembered having  
11 said a moment ago that the worst thing you could do would be  
12 to fail to pay a dividend.

13

BY MR. ERWIN:

14

Q Is that right?

15

A (Witness Jones) That's a layman's opinion. As  
16 a non-financial man, that's my opinion.

17

Q All right.

18

And it's worse to do that than to cut salaries,  
19 whatever the effect on employee morale, whatever the effect  
20 on plant safety?

21

A We did not include plant safety. We did not do  
22 anything in any way to compromise nuclear plant safety during  
23 this. Not in any way, shape or form, to my knowledge.

24

Q Well you don't believe that cutting salaries  
25 affects plant morale?

WRB/wb17

1           A       Not necessarily, if you explain to the people,  
2 and the people understand that you're all in this together  
3 and that you're all going to come out of it together, and  
4 that overall you're going to treat them fairly, and you  
5 don't hide any of the facts.

6                    You can find exceptions in individuals, but over-  
7 all -- we deal with overall -- no, sir, I do not.

8           Q       All right.

9                    And you don't believe the earnings improvement  
10 program, or that some of the-- What other aspects were there  
11 to the earnings improvement program?

12           A       Oh, there were a lot of them. We did all kinds of  
13 things.

14           Q       You tried to cut corners, didn't you?

15           A       But it did not interfere with our nuclear plants  
16 in the construction program. It was to our advantage not to.

17           Q       You tried to cut corners so that you could find  
18 money within your own organization, by economizing in various  
19 ways, to improve your earnings; isn't that basically the form  
20 and function of the earnings improvement program?

21           A       Oh, yes, sir. And I can trot you out a laundry  
22 list of some of the things we did, if it would be helpful to  
23 you, sir.

24           Q       You set priorities within your organization?

25           A       Yes, sir.

WRB/wb18

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Q All right.

And you allocated resources in ways that were -- that you considered best directed to improve your earnings?

A As long as we did not interfere with our nuclear plants. Because those were the things that were going to help us come out of this more than anything else.

Q All right.

But this was top management? The earnings improvement program was mandated from the very top, was it not?

A When you say "from the very top," it was conceived by the senior management and supported by all department heads. All of them had input. We sat down and we didn't just say we were going to do this, we said "How can we do it? and What can we do?"

I want to take this opportunity to tell you that our employees come through in a shining manner. We are terrifically proud of them. They knew we were in a tough situation and they got right with us and they helped us out. And we are very much indebted to them.

Q All right.

You are including in those, of course, the people who were working the 80-hour weeks?

A A lot of them; yes, sir.

Q And those people who were working those 80-hour

WRB/wbl9

1 weeks are still with CP&L, aren't they?

2 A A lot of them are. Some of them aren't.  
3 But there were some who never worked eighty hours a week  
4 or who never worked sixty hours a week; who aren't with CP&L.  
5 So we have all kinds of reasons.

6 Q What happened to the many individuals identified  
7 by Mr. Cantrell who left Brunswick?

8 MR. JONES: Objection. I don't think there is  
9 any foundation for the question relative to "many individuals."  
10 It's an unquantified number and I don't think there has been  
11 any testimony to support this.

12 MR. ERWIN: Mr. Chairman, I believe the quantity  
13 is specified in the testimony of Mr. Cantrell, in his  
14 attachment.

15 CHAIRMAN SMITH: I don't recall quantities.

16 MR. ERWIN: He named specific individuals. I  
17 will try to find this in his-- I'll try to find this.

18 CHAIRMAN SMITH: In his handwritten notes he  
19 showed-- In the context of his testimony-- Those weren't  
20 tpeople who left the employment of CP&L.... I don't recall.

21 WITNESS JONES: As I recall, there were probably  
22 some of them but not all of them. There were transfers and  
23 all involved in this. I don't know how many, but some I  
24 would say did leave the employ.

25 CHAIRMAN SMITH: There's no use debating it.

WRB/wb20

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Mr. Cantrell is here.

That was turnover in plant management, wasn't it,  
Mr. Cantrell?

MR. CANTRELL: I believe it was some of both.

CHAIRMAN SMITH: Mr. Cantrell just said from the  
back of the room that he believes it was some of both.

Do you want to pursue it? Whatever you want to  
do, Mr. Erwin.

End 1D  
2A fls

2a  
WRB/ebi  
fls ld

1 BY MR. ERWIN:

2 Q Now, Mr. Jones, on page 4 of your testimony in  
3 answer to the --

4 A (Witness Jones) Which page, sir?

5 Q Page 4 of your testimony.

6 It says:

7 "What is your general reaction to these  
8 claims?"

9 -- referring to the certain questions concerning the basic  
10 subject matter of this hearing.

11 And your response is initially, as you say:

12 "As to Mr. Cantrell's concerns in  
13 general, we would be the last to take issue....  
14 that we have had problems....or that the Brunswick  
15 startup organization worked longer hours than was  
16 desirable. Our major point of disagreement would  
17 be over the root cause of these problems and the  
18 implications to be drawn...."

19 You say that from your vantage point these  
20 "...were the inevitable consequence of an un-  
21 foreseeable set of more basic problems which began  
22 ....earlier....the inevitable consequence of an  
23 unforeseeable set of more basic problems which  
24 began much earlier."

25 A Yes, sir, I do.

WRB/eb2

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Q All right.

Now "the inevitable consequence" implies to me that there was absolutely nothing that CP&L could do to prevent the things, the complaints that Mr. Cantrell had. Is that the intent that you had in mind when you used the words "inevitable consequence"?

A Well, whether it was those exact events-- Maybe hindsight would have taken care of those, or he would have called us on some of the others, but I would say the maximum effort all through this job on everybody's part was put forth.

Sure, he called us on some things. That's his job, to catch us on things. He's not interested in looking at the good things we do. His job is to get us on the things that we don't quite measure up to, whether it's outside guidelines or whether it's our own procedures which we goof on. Sometimes we write procedures that hang us.

But as far as Mr. Cantrell -- and he's rightly so -- we either followed them or we didn't follow them.

Q So you're essentially revising your testimony that a number of these issues that Mr. Cantrell identified or the number of problems that Mr. Cantrell identified were not inevitable, that they were within the control of CP&L management?

A Well, I don't mean to be revising it. If we're playing semantics now, I say no contest. My intent is not to



WRB/eb3 1 change my testimony. It's what I tried to say, and still  
2 what I believe.

3 Q Well, but if you can do something about a circum-  
4 stance, that circumstance isn't inevitable, is it?

5 A I guess technically you're correct.

6 Q I don't mean technically, I mean like you use the  
7 word every day of your life.

8 A No, I really don't use it often.

9 Q Maybe not. But whenever you use it.  
10 I mean isn't it CP&L's basic defense to these  
11 allegations that they were the inevitable consequence of an  
12 unforeseeable set of more basic problems?

13 Mr. Banks, I believe, or Mr. Utley, I forget  
14 which, refers to it later in their testimony. They specifically  
15 quote the statement.

16 A We need to get this thing back in perspective.

17 Now this whole hearing has been on the basis of  
18 here was a set of rules and guidelines in place back here  
19 when we started, why didn't we learn to get with those? This  
20 is not the real world. There's no resemblance to the guide-  
21 lines and what we have to do now to what was in place and  
22 what we had to do back there.

23 It's like running as hard as you can, doing every-  
24 thing you can, but you still can't gain as much as you want  
25 to because you're running after a bus all the time that's

WRB/eb4

1 moving away from you. This needs to be put in the proper  
2 context here.

3 This is a fluid situation. Certainly we didn't  
4 anticipate that many changes in regulations.

5 Q But you're saying in your direct testimony that  
6 these were inevitable consequences and the consequences were  
7 of a set of basic problems which you had no way of foreseeing  
8 at all. Is that right?

9 A Under the regulatory changes, the numbers of them  
10 and how they are applied and implemented, we certainly did  
11 not.

12 Q All right.

13 Now isn't it true-- Let me ask you to refer to  
14 the testimony of Mr. Utley and Mr. Banks on page 47; beginning  
15 on line 9 they state there:

16 "In the fall of 1974, CP&L's load  
17 forecast for the summer of 1975 indicated a peak  
18 reserve level of only 10.1 percent without  
19 Brunswick....A delay in obtaining the Operating  
20 License....was viewed as having a potential ad-  
21 verse impact...."

22 and so forth and so on.

23 As a result of the ECCS, the Interim Acceptance  
24 Criteria, you decided that you'd shoot for an operating  
25 license by the end of the year, by the deadline. Isn't that

WRB/eb5

1 right?

2 A We decided. I did not decide.

3 Q When I say "you" I mean CP&amp;L corporate management.

4 A No. This was decided at a meeting I attended  
5 with these fellows, with everybody at the Brunswick plant  
6 sitting right there there in the Brunswick plant with the  
7 people who knew what they had to do better than I knew. And  
8 they wanted to try.

9 They also knew how important it was to the  
10 company. Here we had somewhere in the neighborhood of five  
11 hundred million dollars tied up there. We could see, in  
12 spite of everything we had done, that we could just sit  
13 there, and that means a lot of money because construction  
14 loses momentum; everything.

15 I did not decide and there is not a man at this  
16 table who decided, but we participated and, in fact, I  
17 tried to the best of my ability to show them what a huge job  
18 and what a huge undertaking this was.

19 I also explained to them what it meant to the  
20 company if we could do it, and every-- I shouldn't say  
21 everyone, but the consensus of that group, and certainly the  
22 fellows who had to get it done, the fellows who were going  
23 to have to work all those hours, they wanted to do it, and  
24 I supported them in it every way I could.

25 Q All right.

WRB/eb6

1                   And you in fact did get your operating license  
2 on December 27th; isn't that right?

3           A        I believe that is correct.

4           Q        The day before the deadline.

5           A        Yes, sir.

6           Q        All right.

7                   Do you know what your summer peak for 1975 was?

8           A        No. But it's a matter of record. We can look it  
9 up.

10          Q        Did you in fact have any need whatsoever for the  
11 Brunswick Unit 2 to meet that summer peak the following year?

12          A        Did we need it? Well, there's a chance we could  
13 have met it some other way with much higher cost generation  
14 that would have been forced on our consumers. I don't know  
15 the record here. We could have met it with much higher cost  
16 generation, that's for sure. We'd have met it, one way or  
17 the other.

18          Q        The megawattage represented by Brunswick 2 was  
19 not necessary that following year for the -- to meet the  
20 summer peak, was it?

21          A        At the time we made that decision we thought it  
22 was.

23          Q        But it turned out not to be?

24          A        It very well could have not, but then this would  
25 have put us into IC turbines and these things, with the cost

WRB/eb7 1

2 right on to our consumers. We do everything we can to hold  
3 down the cost to the consumers because at best it's high  
4 and we know it's going higher. And one of our responsibilities  
5 is to do everything we can to hold it down and keep it  
6 from going any higher than we can help it.

7 Q You're saying that on the summer peak of 1975  
8 you would have had to have used IC turbines?

9 A I'm almost sure of that. I would have to check  
10 the record. There's a record we could go to. I'm going on  
11 memory.

12 Q But you said that you had committed five hundred  
13 million dollars.

14 A Something in that order. That's what we had  
15 invested.

16 Q Isn't that the basic reason for wanting to make  
17 the run for the -- for a December 27th deadline rather than  
18 the summer peak of '75?

19 A Sure, because the cost of that plant would have  
20 kept going up, plus the loss of that generation and replace-  
21 ment by IC turbines or old fossil turbines or whatever would  
22 have been much greater.

23 Here we were sitting with that investment there,  
24 running the cost up, the cost of that plant. If you just  
25 stop and don't do anything, the cost doesn't stop, it  
materially rises.

WRB/eb8

1 Q But the ECCS requirements that you would have had  
2 to have met after December 28th, those were safety require-  
3 ments, weren't they?

4 A Well, you'd say they were safety related but the  
5 plants operating, that were already operating, were  
6 operating under that criteria. And they said -- NRC, the  
7 ones that were handling all of this said that if you don't  
8 have an operating license by I believe it was the 28th of  
9 that year, December 28th, you cannot operate. We will not  
10 issue you an operating license until this model for -- in  
11 our case a GE model -- is acceptable to them.

12 This is what we were told. We did not view it--  
13 We did not view it as a safety problem because all plants  
14 that were operating were allowed to continue to operate. And  
15 I didn't know of any big safety issue involved in that. And  
16 plus they were going to license others. Now whether they  
17 did or not I don't know. But their statement was that they  
18 would license others, up to the end of that year.

19 Q You don't believe the emergency core cooling  
20 system Interim Acceptance Criteria or the emergency core  
21 cooling system Final Criteria are safety related?

22 A I didn't say that, but not to where I would not  
23 try to operate that plant as long as NRC blessed it.

24 A (Witness Utley) It also should be understood  
25 that operating under the Interim Acceptance Criteria as well

WRB/eb9

1 operating under the Final Acceptance Criteria was certainly  
2 within safe margins as determined by experts, both in NRC  
3 and in General Electric Company and in Westinghouse.

4 Q But those margins-- Well, strike that.

5 Again, Mr. Jones, on page 19 of your testimony  
6 you state -- I mean on page 4 of your testimony on line 19  
7 you state:

8 "As Messrs. Utley and Banks will  
9 describe in more detail, due to a number of  
10 events, many of which were beyond CP&L's control,  
11 we fell behind during the startup of Brunswick  
12 Unit 2. Once we got behind, it actually took us  
13 until mid- to late 1977 to stabilize the situa-  
14 tion. As a result, during the time of Mr.  
15 Cantrell's tenure we were in the position of  
16 having to establish priorities and do a good deal  
17 of shuffling and reorganizing of plant staff in  
18 order to cope with the sorts of problems which  
19 had to be solved. In retrospect it appears to us  
20 that we did a pretty good job during a difficult  
21 period, and that in fact we made sound judgments  
22 in establishing priorities given the resources  
23 available to us at the time."

24 I'll finish the paragraph.

25 "Most important, we think we did it

WRB/eb10 1 without compromising public health or safety."

2 When you say you fell behind, what do you mean?  
3 Did you feel you were behind the eight ball from the begin-  
4 ning?

5 A (Witness Jones) Oh, no, sir. Well, if I did  
6 I'd feel right at home because that's where I stay all the  
7 time.

8 (Laughter.)

9 No. In accomplishing what our fellows accom-  
10 plished in order to get that operating license, practically  
11 all work, not all work but practically all work on the other  
12 unit was stopped. It was just, oh, part construction work,  
13 part concrete, and things like this was continued, but any-  
14 thing to do with instrumentation, controls, and all of these  
15 things was-- Those people were placed over on the No. 2 Unit,  
16 and this did put us behind.

17 Otherwise, see, if we had gone normally we would  
18 have been on our program. We would have carried the con-  
19 struction along on both of them. Certainly the priority  
20 would have been on the unit that is farthest ahead but we  
21 just practically quit all significant construction as far  
22 as mechanical, electrical systems, this kind of thing, on the  
23 other unit during this period.

24 Q When you say "the other unit" you mean --

25 A Unit 1.



WRB/eb11 1

Q Unit 1?

2

A Yes.

3

Q And it took you --- what is it? -- three years to

4

stabilize it.

5

Now as you say:

6

"....during the time of Mr. Cantrell's

7

tenure we were in the position of having to estab-

8

lish priorities...."

9

What do you mean by "priorities"?

10

A Well, you can't do everything at once, regardless

11

of how much manpower you've got, and how much supervision,

12

how much engineering you've got. In a situation like this

13

you have to imagine there's literally hundreds and hundreds

14

of things to do.

15

Now somebody has to set priorities on which you

16

are going to do this morning first, which you're going to do

17

second. If what you want to get done today doesn't get done,

18

which is that going to be that gets left off? And you make

19

these priorities.

20

And the fellows down there had a meeting every

21

morning, and yesterday's priorities are listed for this

22

morning. They're reshuffled because of whatever had happened

23

during the night. And this is a regular thing. We do this

24

all the time.

25

Q Well, when you fell behind in '74 and it took you

WRB/eb12

1 to '77, don't you think that the expenditure of more money  
2 could have helped the problem?

3 A Absolutely not. The biggest fallacy going around  
4 is when you've got a problem you throw more manpower and more  
5 money in it. And you just confuse the situation. And believe  
6 me, sir, we tried that and we know from experience that it  
7 doesn't work. Money does not solve everything.

8 There was nothing not done down there that should  
9 have been done because of money, that I know about.

10 Q Now when you say that what do you mean?

11 A You can only do so many things, plan so many  
12 things, carry so many things out in an orderly manner at one  
13 time. You can put so many men on a construction job, and I've  
14 seen this, until they were actually in each other's way. If  
15 you ever get more men on a construction job than they've got  
16 a plan to work with, that they've got the materials to work  
17 with, and they're going and coming and they're wondering what  
18 they're supposed to do, you're confusing -- you're hurting  
19 yourself. Your productivity will go down.

20 Good planning and appropriate manpower for the  
21 planning and appropriate, experienced supervision is what it  
22 takes.

23 Q Now were you ever in that position at Brunswick?  
24 You seem to imply by your statement that you were.

25 A In my opinion, -- and Mr. McDuffie here, he's the

WRB/eb13

1 construction man, he might disagree with me -- I think we had  
2 too many construction folks on the job at one time because  
3 when I toured the place, everybody was going someplace or  
4 coming from someplace and I couldn't find many of them working.  
5 Everybody was always going or coming, you know.

6 Now Mr. McDuffie will disagree with that, but this  
7 is my opinion of it. Of course I expressed this to him many  
8 times.

9 (Laughter.)

10 But really, planning it and having everything it  
11 takes so that most of the man-- Most of the men want to  
12 work, but they can only work if they've got the materials,  
13 they know what they're supposed to be working on. And that's  
14 the --

15 Q But the decisions to commit these people, the  
16 decisions to commit the people coming and going and not  
17 working, the decisions to go for the December 27th deadline,  
18 you know, the decisions that led to this falling behind and  
19 understaffing, as later referred to, were made by CP&L manage-  
20 ment, weren't they?

21 A Well, I don't agree with the understaffing. That  
22 was no planned thing. We are hindsighting things now. In  
23 everything I've ever done, if you'll hindsight it, I can  
24 point out some of the things I could have done better.

25 Q Now, Mr. Jones, I didn't state that CP&L

WRB/eb14

1 management-- I didn't ask you whether CP&L management had  
2 planned to understaff anything. I aksed you whether or not  
3 the decisions that were made that led to the understaffing  
4 were made by CP&L management.

5 A Well, when you say "understaffing," I'm not sure  
6 we're talking of the same thing. You're accusing us of  
7 understaffing. Everything I've heard here was understaffing.  
8 But we thought at the time we were putting appropriate man-  
9 power in there that could be planned for, and that it could  
10 be done in an orderly manner.

11 You have to remember, Mr. Cantrell, that we were  
12 trying to learn how to live with QA at that time, too, and  
13 this was no easy job. We were dealing with construction  
14 people and this was complete contrary to the way they had  
15 always lived before. And we were faced with convincing them,  
16 look, the way you build it, it's great, but if you don't  
17 have that paper there at the same time the pipe is finished  
18 or this plant is finished, it's not going to operate.

19 Now this was a completely new concept to the  
20 construction people. So one of the biggest jobs I've ever  
21 had in my life was to convince them that Look, we're building  
22 in a new world with new requirements, and that the paper has  
23 got to be there at the same time the work is done or we just  
24 don't move.

25 And we read these things. We find work done,

WRB/eb15

1 and we didn't have the paper for it, and we go back through  
2 the process, trying to find the paper.

3 Also, QA requirements came on this plant after  
4 we had placed the orders for a lot of equipment. Then we  
5 had to go back and apply QA requirements on that vendor  
6 that was no part of the contract or anything else. Some-  
7 times they weren't prepared for it. And you try to put re-  
8 quirements on a supplier that you've already signed on the  
9 dotted line with, and you've got yourself problems.

10 We were dealing in all of this area at this time,  
11 and we were trying to learn as we went along. There was a  
12 lot we had to learn because it was new, and we learned as we  
13 went along.

14 Q You identified this trend, didn't you, as it  
15 developed in the early '70s?

16 A Identified as it developed? As it was put on us  
17 we tried to cope with it, is what we tried to do in every way  
18 we could at that time.

19 We were trying to learn. We had no way of knowing  
20 how much more was coming.

21 Q Well, the decision to go for the December 28th  
22 deadline was an example of your response to these added  
23 requirements, was it not?

24 A Well, it was a response to a situation we found  
25 ourself in at that time. The total organization accepted it

WRB/eb16

1 as a challenge and wanted to do it. And they rose magnifi-  
2 cently to it. I have never seen a group of people that  
3 performed so much in so short a time and did such a good job  
4 of it, and I am extremely proud of them.

5 Q You don't believe the English in World War II did  
6 any better?

7 A No, absolutely not. They did it under more ad-  
8 verse conditions, though, I'll surely admit.

9 (Laughter.)

10 Q So in the period of time during which-- We're  
11 talking about the same period of time that Mr. Cantrell is.  
12 You know, the period of time, the tenure of Mr. Cantrell as  
13 principal inspector at Brunswick is roughly coincident with  
14 this period of time, isn't it?

15 A The way I recall it -- I stand to be corrected --  
16 I believe Mr. Cantrell came about mid-'74 or maybe early '74  
17 and left in '77. This is the way I recall it.

18 Q So you not only believe, Mr. Jones, that the  
19 concerns that Mr. Cantrell had that led to this hearing and  
20 that led to his many memoranda and so forth to his superiors  
21 and so forth were not justified but, not only were they not  
22 justified, but that the circumstances that he was describing  
23 actually attest and are a credit to the CP&L management?

24 A Well, Mr. Cantrell, I don't think, knew all of this  
25 that was going on. He came in there, he had a job to do, and

WRB/eb17

1 that was to find out if there was anything in that total  
2 plant that he could find anywhere that we wan't performing  
3 exactly according to procedures and these kind of things.  
4 And he did that.

5 Mr. Cantrell is a very conscientious inspector,  
6 in my opinion. I think he's got a job to do and he's dedi-  
7 cated to do it and I do not argue with that. But I do not  
8 think that he was in a position to know all that was going on  
9 in the background.

10 He saw what he could, and I certainly think  
11 Mr. Cantrell is entitled to his opinion. And if that was his  
12 opinion I can't quarrel with it, not by opinion. And this  
13 is just a belief on my part.

14 I believe if Mr. Cantrell knew all that was going  
15 on, what we was trying to do and how hard we were working  
16 and the many good things, then he might have had a different  
17 opinion. But that's speculation on my part.

18 Q But the general import of lines 16 and 17 and 18  
19 and 19 of your testimony on page 5 is that you think you  
20 should wear your operating experience over this period of time  
21 at Brunswick as a badge of honor and not a --

22 A Yes. And I think you would agree with it in  
23 comparison with other companies, what they've been able to  
24 accomplish, not me personally but our people. Yes, sir.

25 Q Thank you.

WRB/eb18

1           A       (Witness Utley)  There is one other point that  
2 needs to be made here.

3                   This was also a joint effort on NRC's part.  This  
4 work burden that was put on us put a burden on NRC with  
5 regard to inspections as well as the review of all procedures.  
6 And we were sending people to Atlanta by plane with loads of  
7 procedures that the NRC was required to review on short  
8 notice.  And they responded just as our employees did in an  
9 effort to help us accomplish this very difficult undertaking.

10          A       (Witness Jones)  I would like to add to that.

11                   I was in at least four meetings in the Brunswick  
12 plant -- I believe it was four, at least that many -- where  
13 the inspectors had been in there and sent a large number of  
14 people in there and made up a laundry list.  And they sat  
15 down with us and told us, "These are the things we see right  
16 now that have got to be taken care of or we will not sign  
17 off for this plant to get an operating license."

18                   This was very helpful to us.

19                   Now you talk about your priorities.  Our priorities  
20 switched real fast.

21                   But that was very helpful to us because if they  
22 saw it they told us ahead of time.

23                   "Now what are you doing?  If you don't do these  
24 things...."

25                   And the next time they came back, and they came



WRB/eb19

1 real often and they put large number of people in-- We're  
2 grateful to them.

3 At the same time the gossip was they didn't be-  
4 lieve there was any way in the world we could do it but  
5 they sure pitched in and did whatever they could to help us  
6 in this respect.

7 CHAIRMAN SMITH: Would you read that last sen-  
8 tence back, please?

9 (Whereupon, the Reporter read from the record  
10 as requested.)

11 CHAIRMAN SMITH: Proceed.

12 BY MR. ERWIN:

13 Q Mr. Banks, on page 16 of your testimony on line  
14 15, just as a matter of curiosity, it's a small point, in  
15 the sentence beginning on line 13:

16 "Other information on plant operations  
17 is provided by a report each morning, which con-  
18 tains the plant load level and any significant  
19 operating events during the past 24 hours (or  
20 since Friday in the case of the Monday morning  
21 report)."

22 What does the phrase "plant load level" mean?

23 A (Witness Banks) That's the power level that the  
24 plant is operating on, the number of megawatts that's coming  
25 out of that plant that day.

WRB/eb20

1 Q All right.

2 And you received information on all of your  
3 plants?

4 A That's correct.

5 Q Now on page 20 on line 23 you are asked:

6 "Would you describe the rate of growth  
7 in the numbers of CP&L personnel involved in  
8 nuclear plant operations?"

9 And you give a figure, Figure 6, which shows an  
10 increase from what appears to me to be 250 in '73 -- The  
11 exact figures are in your testimony I believe, and if you add  
12 them up through to about -- what is it? 600-some? -- in  
13 1979.

14 Now how long do you anticipate this trend to  
15 continue?

16 A The increasing number of people, if that's the  
17 trend you're talking about, not necessarily that curve, will  
18 continue up through the time that we completely staff the  
19 Harris organization.

20 Q But do you think that the curve will-- Again,  
21 these are sort of random dates and plants go into operation  
22 on certain dates, and so forth. But when was the last time  
23 that you -- that a plant went into operation?

24 A Brunswick No. 1 was the last nuclear.

25 Q And that was --

WRB/eb21 1

A Commerical operation in March of '77.

2

Q So the operations staff in March of '77 would

3

appear to be something, on your graph, something like -- what

4

is it? -- 700 people? Is that about right?

5

A Somewhere between 450 and 500.

6

Q And you've added another what? 100 to 150? What

7

is it?

8

A I think about 100 people.

9

Q All right.

10

And would you expect that trend to continue, I

11

mean after commercial operation of the Harris units?

12

A If you can tell me what the regulatory people are

13

going to do for the next period of time I can tell you what

2a end WRB 14

Landon fls

15

16

17

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25

fls WRB  
3WEL/wel 1

1 Q Do you attribute the rate of growth in the number  
2 of personnel required almost solely to the increase in  
3 regulatory requirements?

4 A The significant increases that we have had in the  
5 last year or so have been the requirements put on us by  
6 additional security, additional fire protection. Almost all  
7 are attributed to regulatory requirements.

8 Q Again, on page 25 you've got a rate of increase --  
9 this would be on lines 5, 6 and 7 --

10 "For example, during startup of Brunswick Unit 2,  
11 we had approximately 373 personnel..."

12 and you currently have 611. And then you say you have 64  
13 percent increase in just four years time.

14 Now, do you anticipate that you'll have 64 percent  
15 increase in the next four years?

16 A I would hope not.

17 Q Do you have any reason to believe that you won't?

18 A The plant is a more stable plant, being able to  
19 identify people to handle changes in workloads, and better  
20 streamlined regulatory requirements. We are looking at some  
21 other new programs within the plant, management controls.

22 We will try not to maintain the trend, even though  
23 regulatory may continue.

24 Q Now, explain that to me. Are you saying that  
25 you're going to try to get your per-unit cost down, or make

1 things more efficient so your people will be able to deal  
2 with increasing burdens of regulatory requirements and keep  
3 at an even level?

4 A I didn't say we would stay at an equal level. I  
5 was saying that I would hope that we could do better management  
6 of improving as technology improves, with computer programs  
7 on documentation -- this type of thing, where we'd have to  
8 respond immediately by people to handle regulatory, we'll be  
9 able to handle it better with document control systems and  
10 not have to use people.

11 A (Witness Utley) May I add to that, I think it's  
12 important to realize that we are basing what our manpower  
13 requirements are going to be on our best knowledge that's  
14 available today, and looking at our experience and background  
15 and what's happened in regulations. And the best that we  
16 can foresee the future in respect as to what could happen,  
17 we do not at this time feel that regulations is going to  
18 escalate at the rate they have over the past few years,  
19 particularly when you look at the fact that security programs  
20 have been installed, fire protection programs have been  
21 installed, quality assurance programs have been installed --  
22 I'm not sure what other programs you can think up that need  
23 to be installed, that would in any way be applicable in a  
24 nuclear plant.

25 Now, when we look at what our future manpower

1 requirements are going to be, we're looking at this not only  
2 through our own eyes, but through eyes of experts that are  
3 qualified to make these projections, and that is the way we  
4 arrive at what our manpower requirements are going to be.

5 Now, if we have made a mistake and underestimated,  
6 we're going to make adjustments to bring about manpower as  
7 required to properly operate this company and to provide the  
8 consumer with the power they need at the lowest possible cost  
9 under the circumstances.

10 Q Now, on page 31 of your joint testimony -- and  
11 looking back, I believe it's in a series of questions that's  
12 addressed to you jointly -- the question on line 6 is:

13 "What lessons were learned from the Robinson  
14 experience?"

15 The first paragraph of the answer is:

16 "The most significant lesson learned from the  
17 Robinson experience was an appreciation for  
18 the additional staffing required to operate  
19 a nuclear plant in order to perform regulatory  
20 required testing and documentation of plant  
21 activity and to develop programs and procedures  
22 to assure compliance with expanding regulations.  
23 The requirement for operation by detailed  
24 procedures also necessitated a philosophical  
25 change in attitude and training by the personnel

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involved in nuclear plant operations."

In light of what you just said in your testimony about the growth in the last -- in your written testimony -- about the growth in the last four years, and what Mr. Jones has said about the problems at Brunswick, don't you think you didn't learn the lesson -- this lesson -- from Robinson and Brunswick?

A I don't think that's the case at all. I think we did learn the lesson. I think the record shows that we learned the lesson. I think the record also shows that things came about that were completely unreasonable to predict, and as these things came about we reacted to them in a very prudent way from a management standpoint, to get the job done.

We did not do the job that we feel like was representative of the standards that we set for ourselves in some areas. We intend to improve on those as we go into the future.

Q Well, you weren't the only ones who were critical of your performance at Brunswick, were you?

A People that were being paid to be critical of us were critical of us. They made findings that they should have done in carrying out their responsibilities, and I have no qualms about that.

Q All right. I can't point to it right now, but I believe at some point you used the phrase, "We are now

wel 5

1 anticipating..." I think it's probably in one of your  
2 answers, Mr. Utley. You say, "We anticipate the unforeseen."  
3 Isn't that the phrase, "anticipate the unforeseen?"

4 A We anticipate the future based on what we know  
5 about the past and what we know about the present, as to our  
6 best ability.

7 Q But isn't there a statement in your testimony --  
8 I'll look for it --

9 A We have made some allowances for unforeseen  
10 happenings that could take place over and beyond the precise  
11 numbers that we might come out with if we allow no contingency  
12 for unforeseen items.

13 Q Well, doesn't the record indicate to you that  
14 certainly in 1974 you were not anticipating the unforeseen?

15 A I do not agree with that. We did not foresee  
16 entirely the situation that came about in regard to the ECCS  
17 criteria problem that prevailed at Brunswick and the time  
18 limit that was put on us to get that license, or else we had  
19 to go back through a very rigorous reanalysis -- ECCS  
20 reanalysis, which in turn would have delayed the operating  
21 date of that plant several months.

22 We did not foresee to the full extent of what the  
23 implication of that impact was. But I think we reacted to it  
24 in a very prudent way, and in no way subjected the people  
25 working at the site or the general public in any way to any



wel 6

1 unsafe conditions in respect to the operation of the nuclear  
2 plant.

3 I think that's been testified to here by the NRC,  
4 and they confirm that position.

5 Q Now, when you say it's been testified to by the  
6 NRC and they confirmed that position, who testified and what  
7 position are you saying they confirmed?

8 A I'm giving you my viewpoint about the testimony  
9 that's been presented at this hearing, and in no circumstance  
10 am I aware of where they have in any way alleged that  
11 Carolina Power & Light Company has operated their nuclear  
12 plants in an unsafe manner.

13 Q Well, let me ask you to refer, since you made  
14 that statement again -- I think it appears in the written  
15 statement -- but since you're making it orally again, let  
16 me ask you to refer to Attachment 5 of Mr. Cantrell's  
17 testimony, an evaluation memo of the inspection on December  
18 13 -16, 1976 at Brunswick, dated January 4, 1976 -- stricken --  
19 1977.

20 MR.JONES: Mr. Utley, do you have a copy of Mr.  
21 Cantrell's testimony?

22 WITNESS UTLEY: I do. I'm not positive of that...

23 (Pause.)

24 BY MR. ERWIN:

25 Q I'm referring to the first full substantive

1 paragraph of that memorandum which Mr. Cantrell -- we've been  
2 over this -- in which Mr. Cantrell discusses recent management  
3 changes, unresolved items, items of non-compliance, previous  
4 reports, reportable occurrences, his concern as to technical  
5 administrative capability, and then the conclusion that he  
6 reaches:

7 "The fact that CP&L has allowed this condition to  
8 to continue to exist, also, leads me to question  
9 CP&L's ability to safely manage a boiling water  
10 reactor."

11 Isn't that such an accusation?

12 A (Witness Utley) No, sir.

13 Q Why not?

14 A He says there with the situations that are  
15 happening it leads him to question. He does not in any way  
16 allege that we have operated our plants in an unsafe manner.

17 I do not disagree with the intent of that finding,  
18 what he's pointing out there.

19 CHAIRMAN SMITH: I'm sorry, I missed part of that  
20 answer.

21 WITNESS UTLEY: I said I do not disagree with the  
22 things he highlights there as findings. And it's within his  
23 perfect right to draw his conclusion as to the way he views  
24 those findings.

25 CHAIRMAN SMITH: All right. So you're not

wel 8

1 agreeing with his conclusions, though?

2 WITNESS UTLEY: No, I don't agree with the  
3 implication of the conclusion, so to speak.

4 CHAIRMAN SMITH: Were you going to pursue this?

5 MR. ERWIN: No, I just -- you know, you get to  
6 the point where -- I was just asking whether he -- you know,  
7 he's answered my question, I think. He stated that nobody  
8 has questioned their ability to safely operate the plants.

9 MR. JONES: Mr. Chairman, I don't think there's  
10 an outstanding question. I think the question was answered,  
11 and I don't know what Mr. Erwin is arguing about. I don't  
12 think there's any necessity --

13 MR. ERWIN: I'm not arguing about anything.

14 CHAIRMAN SMITH: He answered my question --  
15 excessively.

16 (Laughter.)

17 CHAIRMAN SMITH: You have left the impression in  
18 my mind, Mr. Utley, that you agree with the facts set forth  
19 in Attachment 5, but not the conclusion. And I don't think  
20 that's what your intent is. I just want to clarify that at  
21 this time.

22 WITNESS UTLEY: Well, let me give you my viewpoint  
23 on the findings, and my viewpoints on the conclusions.

24 CHAIRMAN SMITH: All right. We're talking about  
25 Attachment 5 to Mr. Cantrell's testimony.

wel 9

1 WITNESS UTLEY: Yes, sir.

2 My viewpoint on the findings, as far as I know  
3 they are correct.

4 And as I view and understand Mr. Cantrell's  
5 conclusion it is that these type things point toward in a  
6 direction of unsafe operation. They do not say that unsafe  
7 operations are taking place.

8 CHAIRMAN SMITH: Yes, I understand that. And I  
9 tend to agree with you. This is a prospective thing, it's  
10 precautionary. But I'm concerned about the little detail  
11 that you put in there, and that is that you agree with the  
12 basic facts set forth, but not the conclusion. And one  
13 thing he says, for example, is that:

14 "Individually, each man appears to meet the  
15 minimum qualifications for the position but  
16 collectively I do not believe they meet the  
17 intent of the technical specifications or  
18 ANSI N18.1-1971."

19 Now, you don't agree with that?

20 WITNESS UTLEY: I don't agree with that, no, sir.

21 MR. JONES: Mr. Chairman, I think there's some  
22 problem in reading the memo itself, because I believe the  
23 subject matter changes half way through that paragraph, which  
24 is a fact I'm not sure I fully appreciated yesterday in  
25 recrossing Mr. Cantrell. But he starts talking about the type

1 items identified as unresolved items. In previous memoranda  
2 it would appear to me that the structure of the memorandum  
3 would lead you to conclude that the conclusion refers back  
4 to the sentence beginning with the phrase, "The type items  
5 identified as unresolved. "

6 MR. ERWIN: Mr. Chairman, that was the exact  
7 purpose -- the problem that Mr. Jones has identified was the  
8 exact purpose for which I had asked Mr. Cantrell at some  
9 length, excessive length, I'm sure, to define what the  
10 predicate for his conclusion was. And I think he very  
11 clearly and directly stated that it was all of the things  
12 that he had identified in that memorandum.

13 CHAIRMAN SMITH: I'm only interfering with the  
14 cross-examination at this point to make sure that Mr. Utley's  
15 statement is not thrown back in this record out of context,  
16 and he understands what he's saying, and I'm sure he does.  
17 And I think he's clarified it.

18 BY MR. ERWIN:

19 Q ON page 33 of your joint testimony, beginning with  
20 the question on line 17 -- this is where the direct quotation  
21 of Mr. Jones appears -- the question reads:

22 "Mr. Jones stated that the problems identified  
23 by Mr. Cantrell while he was an inspector at the  
24 Brunswick plant were 'the inevitable consequences  
25 of an unforeseeable set of more basic problems

1           which began much earlier.' Could you tell us  
2           what these root problems were?"

3           Now, I believe that this is a question from the  
4 previous testimony that's addressed to both of you, and I'll  
5 ask the question of both of you:

6           Does your answer to this question imply or  
7 explicitly endorse . . . imply that you agree with Mr. Jones'  
8 conclusion that these problems were the inevitable conse-  
9 quences of an unforeseeable set of more basic problems which  
10 began much earlier?

11           I want to make that clear.

12           A       (Witness Utley) Well, my understanding of Mr. Jones'  
13 comments in the testimony and what this testimony supports,  
14 I agree with 100 percent. And I think it's consistent with  
15 the prior testimony that I've given this morning.

16           Q       If I'm using run-on sentences again, then I'll  
17 try to break them down and ask this:

18                   Mr. Jones says that these problems that were  
19 identified by Mr. Cantrell were the inevitable consequences  
20 of an unforeseeable set of more basic problems which began  
21 much earlier.

22                   I'm asking you -- and both of you directly quote  
23 this phrase that appears in his testimony, which appears to be  
24 the prime CP&L defense to the problems identified --

25                   DR. LEEDS: Excuse me, Mr. Erwin. You say they

1 quote. They didn't write the question, did they?

2 MR. ERWIN: Well, I'm sorry. The questioner uses  
3 the phrase. You're absolutely correct. Perhaps that's why  
4 I need to ask the question, because the question presupposes  
5 that -- well, I'll ask.

6 BY MR. ERWIN:

7 Q The question presupposes that you agree with Mr.  
8 Jones' categorization, and I'm asking you now whether in fact  
9 both of you, each of you and both of you, do in fact agree?

10 A (Witness Utley) Yes, I do.

11 A (Witness Banks) The way I understand the statement,  
12 I agree.

13 Q All right. Now, how do you understand the statement,  
14 Mr. Banks?

15 A Things that happened that we did not know, that  
16 we'd take those into consideration, the consequences that  
17 came from it. And this to me is not unusual to the startup.

18 I've been involved in five different startups at  
19 different nuclear plants, and that's no different.

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2 Q Now, just so that there's no misunderstanding  
3 whatsoever on your part as to what I'm asking, and so there's  
4 no misunderstanding on my part, the question that's asked  
5 you beginning on line 17 on page 33 of your joint testimony  
6 is:

7 "Mr. Jones stated that the problems  
8 identified by Mr. Cantrell...were "the  
9 inevitable consequences of an unforesee-  
10 able set of more basic problems..."

11 Et cetera, et cetera.

12 Now I'm asking you whether you agree with the  
13 statement as contained in that question, whether you believe  
14 that the problems identified by Mr. Cantrell were the  
15 inevitable consequences of an unforeseeable set of more  
16 basic problems?

17 A (Witness Banks) I agree with that.

18 Q Without any qualifications?

19 A Without any qualifications.

20 Q Mr. Utley, I think you have -- ~~you~~ would not  
21 change your statement that you agree with that because  
22 of anything that I have just said?

23 A (Shaking head negatively.)

24 Q Thank you.

25 Now, the answer that follows is:



1 "Most of the problems that we encountered during  
2 the"---

3 Now, you're making a distinction there between the  
4 problems identified by Mr. Cantrell and the problems that  
5 you encounter. They may very well be two different -- you  
6 may see them, and it appears that you do, as two different  
7 sets of problems.

8 A (Witness Banks) I'm answering to the problems I  
9 encountered.

10 Q Okay. You're not talking about -- in your answer  
11 here you're not talking about the problems identified by  
12 Mr. Cantrell, are you?

13 A (Shaking head negatively.)

14 Q And you say that:

15 "Most of the problems that we encountered during  
16 the construction and startup of Brunswick were  
17 typical of the types of problems which might be  
18 encountered in the construction and startup of  
19 any complex project -- and in particular of  
20 a nuclear power plant. However, the magnitude  
21 of these problems and their cumulative impact  
22 were indeed unforeseeable."

23 Now, you're not only saying that the problems  
24 identified by Mr. Cantrell were unforeseeable, but that the  
25 cumulative impact of the problems that you encountered were

wel 2

1 unforeseeable, is that right?

2 A That's right.

3 Q Okay. And then you say they fall into four  
4 categories: design and engineering, construction, regulatory  
5 changes, and staffing.

6 Now, you've previously stated that the great  
7 increase in operation staffing requirements you attribute over  
8 the last four or five years, including this period of time,  
9 you attribute almost exclusively to increases in regulatory  
10 changes, is that right? Am I being fair to you? I'm just  
11 trying to move us along.

12 Is that a fair statement?

13 A I believe that's a fair statement.

14 Q Okay. But you put four categories here. What  
15 other kinds of staffing problems did you encounter at  
16 Brunswick other than the staffing problems required by  
17 the imposition of greater regulations?

18 A The problems that were put in the four categories  
19 were the problems that we encountered, and one of the problems  
20 we encountered was staffing. That's the way that was  
21 intended.

22 Q All right. In general what were the problems of  
23 staffing that you encountered at Brunswick? I don't mean  
24 every problem, but you're talking about the cumulative impact  
25 of these problems, and I would think you'd be able to

wel 3

1 generalize about your staffing problems at Brunswick during  
2 this period.

3 A As identified later on in our testimony, we had  
4 staffing problems and we brought in contract people to make  
5 up for the lack of CP&L people.

6 Q All right. Now, are you saying that those problems  
7 were solely -- you know, we're talking about two different  
8 things -- are you saying that those problems that you  
9 identified later in your testimony were solely attributable  
10 to the increase in regulatory -- change in the regulatory  
11 climate, or increase in regulatory requirements?

12 A That's not what I said.

13 Q I'm asking you what you are saying.

14 A I'm saying, as stated in this sentence, that these  
15 are four problems we had. One of those problems were  
16 staffing. Regulatory was a problem. Construction was a  
17 problem. Design and engineering was a problem.

18 Q All right.

19 I'm asking you what other problems than those  
20 attendant upon an increase in regulatory requirements did  
21 you encounter in staffing at Brunswick?

22 You previously said that you had a problem with  
23 staffing, because every time you turned around there were  
24 new requirements, and you've got to staff people to do that.

25 Is that a layman's way of putting it?

wel 4

1           A       I said that the additional regulatory requirements  
2 changes staffing requirements.

3           Q       All right. That's a problem, and you have to deal  
4 with that as a staffing problem, and I presume it's a joint  
5 problem that falls under your two categories. It's really  
6 related to regulatory changes and related to staffing, isn't  
7 it?

8           A       That is one of the problems with staffing,  
9 regulatory is one of the problems with staffing.

10          Q       Okay, that's my point.

11                   What were the other problems with staffing that  
12 you encountered at Brunswick?

13          A       One of the problems you have is finding experienced  
14 personnel to take a job that is there. You can't take a new  
15 engineer out of school and put him in as an experienced  
16 engineer. So what you do, you hire that junior engineer, but  
17 at the same time you bring in contract engineers to supplement  
18 him, who has experience.

19                   This is staffing problems.

20          Q       All right.

21                   Now, that's one of the big lessons you learned  
22 from Robinson, wasn't it?

23          A       (Witness Utley) May I interrupt here and try to  
24 get this thing in perspective as to the real way?

25                   If you go back to Mr. Jones' statement, what he's

wel 5

1 saying there is the results of things that happened as we  
2 were moving toward licensing of Brunswick brought about the  
3 situation that was natural to establish some of the findings  
4 that were brought about as a result of Mr. Cantrell's  
5 inspections, and so forth. And much of this was the cause of  
6 regulations that required redesign of equipment, and so  
7 forth, which, in turn, compounded the problem in some cases.

8           The startup was even delayed as a result of the  
9 redesign to meet certain regulatory requirements, and as a  
10 result of this, it did bring about a staffing problem, and  
11 it brought about a problem in meeting our objectives in regard  
12 to getting the license.

13           MR. TROWBRIDGE: Mr. Chairman, I hope I'm not  
14 interrupting the line of cross-examination, but considering  
15 that Mr. Erwin's estimate yesterday was that it would take  
16 10 minutes to formulate his questions to this panel, I wonder  
17 if we hadn't better ask Mr. Gordon now to make arrangements  
18 for an evening session?

19           CHAIRMAN SMITH: Let's defer that until after  
20 lunch.

21           MR. TROWBRIDGE: I don't know how long it will take  
22 him to do that.

23           MR. GORDON: I don't think it will take that long.  
24 After lunch would be all right.

25           MR. ERWIN: I believe I said 15 minutes, and that

wel 6

1 was prior to the supplemental -- or the substitute of numbers.

2 CHAIRMAN SMITH: Well, I didn't regard that as  
3 binding, and I don't think the answers were given in the  
4 sense of their being binding. Whatever we have to do, we  
5 have to do.

6 MR. ERWIN: I don't have very much more anyway.

7 CHAIRMAN SMITH: This has come up several times.  
8 I do have one question I would like to have on the record  
9 at this point.

10 Mr. Utley, it seems to me, to summarize so far,  
11 your attitude about the staffing problem is, yes, there were  
12 staffing problems. But they were as a result of unforeseeable  
13 circumstances, and that in each instance CP&L acted  
14 responsibly under the circumstances prevailing at the time.

15 And then you say you agree with Mr. Jones.

16 But as I listen to Mr. Jones, he never does come  
17 quite out and say that there was a problem.

18 Now, is there a basic disagreement between your  
19 approaches, your viewpoints, there? You never really come  
20 right to the line where you say, "Yes, there was a problem,"  
21 Mr. Jones, and if I've missed it in your testimony someplace --

22 WITNESS JONES: Sure we had that problem. We had  
23 all these other problems. They're all interconnected. You  
24 can't just isolate one and say -- they're all so interconnected.

25 CHAIRMAN SMITH: Exactly. I'm not arguing about

wel 7

1 your justification for it, but I never really did catch you  
2 ever saying, "Well, we did have a problem."

3 Now, you mentioned hindsight --

4 WITNESS JONES: Yes, sir. I'll say it now for you:  
5 We did have a problem.

6 CHAIRMAN SMITH: I don't mean to use the word  
7 "catch." That's not intended. I'm trying to get not only a  
8 specific record, specific questions and answers, but the  
9 Board is also trying to get an overall impression of how  
10 management has regarded this whole incident, and I think  
11 that's important.

12 WITNESS JONES: Yes, I do too, and we'll do anything  
13 it takes to try to give you the impression as we know it was.

14 CHAIRMAN SMITH: Go ahead, Mr. Erwin.

15 BY MR. ERWIN:

16 Q So, Mr. Utley, then you're saying essentially that  
17 there were other staffing problems besides those that were  
18 attendant upon increases in regulatory requirements?

19 A (Witness Utley) I did not say there were other  
20 problems. There are problems in staffing, as has been  
21 described, and if there's a shortage of manpower then it's  
22 incumbent upon doing whatever is required in order to support  
23 the staff to whatever extent is appropriate for the job to  
24 be done. And that's what was accomplished.

25 Q All right. Now, you say a shortage of manpower.

wel 8

1 Do you mean to say that you couldn't hire, that there just  
2 wasn't a pool of skilled personnel? Is that what you mean by  
3 shortage of manpower?

4 A I did not say that. Mr. Banks has testified to  
5 the fact that any time there was a lack of personnel on CP&L's  
6 payroll, it was made available out of construction pools.

7 Q Out of construction pools?

8 A Or consultants who furnished manpower for  
9 specified expertise in different fields.

10 Q All right.

11 Then is it your testimony, Mr. Banks, that there  
12 was a lack of -- or that there was an insufficient pool of  
13 skilled and experienced personnel for CP&L to call upon?

14 A (Witness Banks) That was not my testimony. I  
15 said we had the manpower.

16 Q All right. You had -- well, then is it your  
17 testimony that there was a sufficient pool upon which you  
18 could draw?

19 A I am allowed to go to people that we have contracts  
20 with to provide me with manpower when I do not have it in  
21 house.

22 Q So can I take that answer to be a yes answer to  
23 my question?

24 A Would you repeat your question?

25 Q Is it your testimony that you did have a sufficient



wel 9

1 pool of skilled and experienced personnel for the startup  
2 and operation at Brunswick?

3 A I think that changed someplace.

4 CHAIRMAN SMITH: Are you including in your question  
5 consultants and contract personnel?

6 MR. ERWIN: Yes. A pool. In other words, I'm  
7 asking him if they are stating that they didn't -- there  
8 was some problem in the market for personnel, that they  
9 just couldn't get people to go down to Southport.

10 CHAIRMAN SMITH: In the first instance, he did not  
11 answer your question. He said he's allowed to do it. But  
12 the question was whether -- the question I think is clear,  
13 including your own employees and personnel which would be  
14 available from contract or consultant sources, was there a  
15 sufficient pool of trained and qualified persons for the  
16 time that we're talking about?

17 WITNESS BANKS: The answer is yes, but I'd like  
18 to clarify it.

19 There are times when management decisions on  
20 getting the manpower on board is not as appropriate as you  
21 would like to do on Monday morning after the game on  
22 Saturday, that I would have brought more manpower on earlier  
23 in many cases if I had known the problems were going to be  
24 as big as they were. We would bring on the manpower to do  
25 the job, what we thought it was going to be. So there were

wel 10

1 times when there may not have been what has been considered  
2 an adequate manpower on site.

3 But it was only because we didn't recognize the  
4 size of the job early enough.

5 CHAIRMAN SMITH: Nor could you have recognized it?

6 WITNESS BANKS: That's correct.

7 BY MR. ERWIN:

8 Q And it's your opinion that you could not have  
9 recognized the size of the problem beforehand?

10 A (Witness Banks) That's correct.

11 Q Now, there were some people who left Brunswick  
12 during the period of time, weren't there?

13 A Yes.

14 Q Who were they?

15 A (Pause.)

16 Q Well, tell me, first of all, who resigned from  
17 CP&L and was not transferred to another CP&L plant in the  
18 senior supervisory personnel at Brunswick? I think we've got  
19 Mr. Cantrell's handwritten notes. I'm really interested in  
20 the people -- in the transitions that he identified, and if  
21 you need it, I'll be happy to give you the reference to that.

22 A As my memory goes back over the history of looking  
23 at Brunswick and what you're classifying as senior management,  
24 since that plant was the first put together with a crew, I  
25 recall right now -- and I'd have to check the records -- that

wel 11

1 we had four supervisors from inception up to today that  
2 resigned from the plant.

3 CHAIRMAN SMITH: Can you compress that time frame  
4 any more? From inception up until today, you stated?

5 WITNESS BANKS: That's correct.

6 CHAIRMAN SMITH: Would you say -- when was the  
7 last resignation?

8 WITNESS BANKS: I'd have to look at some documents  
9 I have here. I don't remember offhand. It's a couple years  
10 ago.

11 CHAIRMAN SMITH: So the time period in which the  
12 resignations occurred was --

13 WITNESS BANKS: I would say if you compressed it  
14 down, between 74 and 77 is the period we're talking about.

15 BY MR. ERWIN:

16 Q Do you have an opinion satisfactory to yourself  
17 as to the reasons why these men left CP&L employment?

18 A (Witness Banks) I do not personally interview  
19 any of them. I can say that we have been contacted by four  
20 of them asking us to come back for reemployment.

21 Q By all four of them?

22 A Yes.

23 Q Well, is that recently, over the period of time  
24 since then, is that it?

25 A I'd say over the last three years.

1 Q All right.

2 You obviously think that means something. What  
3 does that mean to you?

4 A Well, it means to me that they thought the grass  
5 was greener on the other side of the fence, and they got over  
6 there and it wasn't.

7 Q Well, at the time that they left doesn't it  
8 suggest to you that they thought the grass was pretty brown  
9 on their side of the fence?

10 A It doesn't mean that to me.

11 Q Okay. But the reverse -- you know, if they want  
12 to come back, it does mean that the grass is greener at CP&L?

13 A That's the way I'd read it.

14 Q Okay.

15 You were here yesterday during Mr. Cantrell's  
16 testimony, were you not?

17 A Yes, sir.

18 Q And you heard the lengthy -- the answers that he  
19 gave to questions regarding the rate of turnover and the  
20 experience of the personnel at Brunswick, and their boiling  
21 water and pressurized water reactor experience, and so forth?

22 A Yes, I heard it.

23 Q All right. And did you ever, at any time during  
24 this period of time have a concern in any way similar to  
25 Mr. Cantrell's about the depth of experience of your personnel

wel 13

1 at Brunswick?

2 A As management, I always have that concern.

3 Q All right. Was your concern any greater during the  
4 period of time of '76 and '75 through early '77 than it has  
5 been since?

6 A I never had any concern that the people were not  
7 qualified to do the job they were in. I did have concern that  
8 could they meet the high standards that we would like for them  
9 to meet.

10 Q And to whom did you communicate your concern?

11 A From the time I've been in this position, those  
12 concerns were communicated to Mr. Utley. At that time I  
13 worked directly for him.

14 Q And what was his response to your concerns?

15 A We were mutually looking at where we were, and we  
16 were evaluating where we were, to be sure that we were not  
17 getting into a condition that would ever get close to approach-  
18 ing an unsafe operation of our individuals.

19 Q All right. When did you review where you were?

20 A I can't give you a specific time. These were  
21 ongoing conversations that management has when you report  
22 directly to an individual.

23 Q When the supervisors that you mentioned resigned --  
24 well, you stated you never interviewed them, is that correct?

25 A That's correct.

wel 14

1 Q Did the fact that they were resigning come to your  
2 attention before they left?

3 A Most of them resigned before I was in my present  
4 position, so I was not aware of it before they left.

5 Q Were you in -- you would not have been in the  
6 normal chain of command to which they would have -- you know,  
7 the reports of these resignations would have been sent?

8 A That is correct. But I was Manager of Corporate  
9 Quality Assurance, so I was aware of what was taking place  
10 at the plant.

11 Q Mr. Utley, were you in the direct line or chain  
12 of command where the reports of these resignations would  
13 have come to you?

14 A (Witness Utley) Well, I was in the direct line  
15 of management. However, you need to realize that I was  
16 removed several levels from the plant operations, and my  
17 information in regard to the situations that prevailed was  
18 primarily a discussion with the then Manager of Nuclear  
19 Generation.

20 Q Who was occupying the position Mr. Banks now holds,  
21 is that right?

22 A That's correct.

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23

24

25

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2 Q He was occupying the position that Mr. Banks  
now holds; is that right?

3 A That's correct.

4 Q --sort of?

5 A That's right.

6 Q You had a reorganization since then, but basically  
7 that's the position that you're talking about?

8 A Right.

9 Q Okay.

10 Now was there any discussion at the time about --  
11 that you remember, about the resignations of these individu-  
12 als?

13 A Certainly there was discussions in regard to  
14 resignations of people who were in supervision. And we  
15 discussed the reasons and why foras, and so forth, as to why  
16 these people would be leaving. And we never came to any  
17 really conclusion that any pattern was set, that a group of  
18 people were leaving because of any one situation.

19 In each situation there were different circum-  
20 stances that brought about the resignations. For example,  
21 one that I recall had to do with Mr. Holder. And it was my  
22 understanding that Mr. Holder more or less appreciated  
23 startup type work. There was another facility starting up  
24 on the West Coast, and he had the opportunity to fill a job  
25 out there. And he so decided to go.

WRB/wb2

1 Q And was Mr. Holder an important part of your  
2 management -- your supervisory team at Brunswick at that time?

3 A He was. However you need to realize we were  
4 approaching the end of the startup operations at this time.  
5 It was, as I recall, just prior to the commercial operation  
6 of Brunswick-1.

7 Q Now Mr. Holder was replaced by whom? I have it  
8 in my notes, but--

9 A At the time he left he was filling a startup  
10 superintendent's position. And considering the fact that we  
11 were practically into commercial operation, that job was  
12 not -- he was not replaced in that job, in that the plant was  
13 being taken over by the operating people.

14 Q Do you remember the circumstances of other  
15 resignations?

16 A I don't remember the specific circumstances to  
17 discuss them in detail.

18 There were various things discussed as to the  
19 reasons people were leaving: they were working long hours;  
20 as we recognized, longer hours than we look at as being good  
21 management practice, so to speak, under continuing circumstances.  
22 And the Brunswick location is really not conducive in many  
23 ways to maintaining people, particularly when they're working  
24 under these circumstances. Because many of them prefer to  
25 live in Wilmington, which is the closest town of any size.



WRB/wb3

1 And if you're working irregular hours and back and forth to  
2 the plant you have a commuting distance of some thirty miles  
3 back and forth. And during the startup period this also  
4 worked an economic disadvantage for them, as well as an in-  
5 convenience. Plus the fact that it was separating them from  
6 their families. It was a hardship: we do not in any way try  
7 to allege anything else.

8 Q Would you accept Mr. Cantrell's conclusion that  
9 in general the personnel that replaced the -- and I'm not  
10 only talking about resignations here, but the general turnover  
11 that he refers to on page 3 of his Appendix 1, which is  
12 3 plant managers; 3 assistants; 5 engineering supervisors;  
13 3 maintenance supervisors; 3 rad -- whatever that is;  
14 4 environmental control supervisors, and 3 operation super-  
15 visors. Would you agree with his conclusion that, I believe  
16 that he stated, that it was his opinion -- and I can't quote  
17 the transcript -- that the replacements were, in general,  
18 less experienced than the people that they were replacing?

19 A I'm not sure that I agree with that in every  
20 circumstance. There possibly was some replacements that maybe  
21 didn't have the total experience that some of these people  
22 had. But I think you need to realize that in no case did we  
23 put people in jobs that did not have the capability to do  
24 the job, and also met the requirements of ANSI standards.

25 Also, as you look at the results produced under

WRB/eb1  
fls wb3

1 the management of the Brunswick plant, there has been a  
2 continual improvement in the results of operation since these  
3 type things took place.

4 So I think you would have to draw the conclusion  
5 that they were prudent moves on the part of management for  
6 whatever reasons, and it has resulted in a better operating  
7 plant at Brunswick.

8 Q Well, would you agree with-- Again I can't....  
9 If I'm misquoting Mr. Cantrell, he's in the room and he can  
10 stop me.

11 But would you agree with the conclusion that I  
12 believe I heard from him yesterday that it was his opinion  
13 that the situation toward the latter part of '76 was de-  
14 generating, not improving at all?

15 MR. REIS: I object.

16 MR. JONES: I object.

17 MR. REIS: I don't believe a burden should be  
18 put on Mr. Cantrell to interrupt the statements if he is not  
19 paraphrased correctly. Let him cross-examine one witness at  
20 a time. I don't have any basic problem with the question  
21 asked but asking Mr. Cantrell to interrupt is something else  
22 again.

23 MR. ERWIN: I just wanted to be fair to  
24 Mr. Cantrell.

25 MR. JONES: Mr. Chairman, I think Mr. Erwin has

WRB/eb2 1 now the transcript of whatever Mr. Cantrell did say. Rather  
2 than his trying to characterize it, he ought to point to what  
3 it is he's talking about.

4 CHAIRMAN SMITH: I think Mr. ERwin was trying to  
5 be fair to everyone concerned. But there is an objection,  
6 so so be it.

7 You don't put a burden on Mr. Cantrell in facing  
8 the objections to interfere. If we come to a point where there  
9 is doubt, true doubt, and it will expedite things, we will  
10 ask him directly.

11 MR. ERWIN: I didn't have the transcript until  
12 this morning and I just haven't had a chance to look at it.  
13 I wish I could have pointed to it.

14 BY MR. ERWIN:

15 Q But I just wanted to see whether you would have  
16 categorized this period of time in the same general terms as  
17 Mr. Cantrell did yesterday. And I won't even put anything  
18 subjective in there.

19 A (Witness Utley) I am sure I would not have. But  
20 for one thing, I was not in Mr. Cantrell's position and had  
21 no way of viewing it from his position as an inspector. I  
22 was viewing it from my position as management and looking at  
23 what needed to be done in order to best manage, control, and  
24 operate that plant.

25 And I think you've got to know whether those

WRB/eb3 1

2 decisions were right or wrong. You've got to look at the  
3 results that's coming out of the operation. And I think the  
4 testimony shows that improvements are being made, and we are  
5 not there, and I don't claim we are there. We still plan to  
6 make further improvements.

6.090

7 Q So you say the decisions that were made in late  
8 '76 were justified by the trends that you see since then, just  
9 to summarize?

10 A I can go through the same statements I've made  
11 several times. The record is clear as to my position in  
12 regard to that.

13 Q In conclusion then, your basic -- the basic  
14 thrust of your testimony in regard to this period, and  
15 Mr. Bank's testimony in regard to this period of the startup  
16 and operation of Brunswick is that there was nothing that  
17 CP&L management could have done during this period of time to  
18 have met Mr. Cantrell's concerns?

19 A That's a pretty in-depth question, asking the way  
20 it's asked.

21 Let me say that from a management position and  
22 looking at the operations as it progressed from the startup  
23 of Brunswick until today, prudent changes have been made in  
24 organization to improve the operation, and in turn will  
25 improve our relations with NRC as well as the findings that  
come out of that plant from an operating standpoint,

WRB/eb4

1 particularly when you take into account the proliferation of  
2 regulations and the numbers of things that we are being  
3 inspected against today in regard to the new tech specs versus  
4 the old tech specs versus the security program versus the  
5 fire protection, and all the other many things. Considerable  
6 improvements have been made.

7 And as I say again, the record supports this.

8 Q Let me just-- Let me rephrase the question then.

9 If you will refer again to Attachment 5 to  
10 Mr. Cantrell's testimony, his January 4th memorandum to  
11 Mr. Dance, and refer to the concerns that he expresses there,  
12 let me ask you what, if anything, CP&L management could have  
13 done at this time, in your opinion, to have met those con-  
14 cerns?

15 A I think management did everything that was reason-  
16 able to do when you look at the circumstances and conditions  
17 under which the plant was progressing in regard to startup  
18 versus regulations versus construction, design, and so forth.

19 MR. ERWIN: No further questions. Thank you.

20 CHAIRMAN SMITH: Do you want to begin your cross-  
21 examination now, Mr. Reis, or would you rather take the  
22 luncheon break?

23 MR. REIS: Whatever the Board prefers.

24 CHAIRMAN SMITH: Well, let's break for lunch now.  
25 Since we do have a time problem we will just limit it to one

WRB/eb5

1 hour today, and return at quarter to 1:00.

2 Is that acceptable?

3 MR. JONES: We would really recommend less than  
4 an hour. There really aren't very many places you have to  
5 choose from around here, fast food places anyway.

6 CHAIRMAN SMITH: I don't know what the crowd might  
7 be down there at this time. Would it be realistic to take  
8 a 45 minute break?

9 MR. JONES: There is also a fast food place  
10 across Peace Street within a block's walking distance.

11 CHAIRMAN SMITH: I don't know how many more of  
12 these fast food places there are.

13 (Laughter.)

14 We will return at 12:30.

15 (Whereupon, at 11:45 a.m., the hearing in  
16 the above-entitled matter was recessed to reconvene  
17 at 12:30 p.m. the same day.)

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## AFTERNOON SESSION

(12:30 p.m.)

3 CHAIRMAN SMITH: All right.

4 Whereupon,

5 J. A. JONES,

6 EDWIN E. UTLEY,

7 HAROLD R. BANKS,

8 and

9 M. A. MC DUFFIE

10 resumed the stand as witnesses on behalf of the Applicant,  
11 and, having been previously duly sworn, were examined and  
12 testified further as follows:

CROSS-EXAMINATION (Continued)

13 BY MR. REIS:

14 Q Mr. Jones, you testified before that you felt  
15 that SROs were desirable, or the training for an SRO was  
16 desirable for your upper management supervisory employees  
17 to have. However, I don't believe you indicated why you  
18 felt that was desirable.

19 Will you please do that?

20 A (Witness Jones) Well, I thought I did. Maybe  
21 I didn't make it clear.

22 It's because in some of these jobs you really  
23 don't get plant operating experience, that they can  
24 satisfactorily perform that job. Well, in any of those  
25 jobs you assume everybody is heading toward the next job,

mpb2

1 or has aspirations towards that job.

2 Well, if a man is over here in this one job  
3 that doesn't require that training, yet he has initiative,  
4 and we make this available to him, he has initiative to do  
5 that. To get to that next job, he stands a chance of mov-  
6 ing over to this job and broaden his experience, because  
7 if he ever makes it to the next job he's over all of those.  
8 And in that way it helps.

9 Both the company gives us more flexibility if  
10 we need to switch a man from job to job, or it gives us  
11 more people available to look at for the top job.

12 Q So it's only from the point of view of upward  
13 mobility of your employees that you think it's desirable?

14 A Yes.

15 Q How many people now in the top eight management  
16 positions at Brunswick, which have the asterisks next to  
17 them, SRO desirable, have those qualifications now, either  
18 through training or the certificate?

19 A I cannot answer it. But one of my associates  
20 could.

21 A (Witness Banks) I gave those numbers, I believe,  
22 earlier.

23 At the Brunswick Project in the supervision we  
24 have two of them that have SRO. One of them is required,  
25 one is desirable. Of the ones that have the training, there



mpb3 1 is -- five other ones have the training.

2 Q Previously you talked about the earnings  
3 improvement program of CP&L, and you talked of its impact  
4 on wages during a short two and three month period.

5 A (Witness Jones) I checked that at lunch. It  
6 was actually a four month period.

7 Q A four month period.

8 Was there any limitation during -- you say the  
9 earnings improvement program now extended over a longer  
10 period of time?

11 A That's correct.

12 Q And over that longer period of time were there  
13 any limitations on hiring within the company?

14 A Yes, there were. The major difference was that  
15 we have -- everybody has numbers of authorized boxes, as  
16 we call them on the organization chart, that is approved  
17 by the senior management committee. During a period of time  
18 -- I don't have exactly how long -- but during this  
19 improvement program they require the approval of our chief  
20 executive officer to fill one of those boxes.

21 Q I see.

22 And was there any limitation during that period  
23 on using contractors?

24 A No -- well, wait a minute.

25 Yes, line contractors, we use a lot of line

mpb4

1 contractors. Well, practically all of our tree trimming  
2 is done by contractors. And this is where we could --  
3 another company policy is that we try to offer permanent  
4 employment to all of our people as far as having worked  
5 for them as long as they performed satisfactorily. To do  
6 this, we cut our peak work, our seasonal work, and these  
7 kind of things, with contractors.

8 During this period we cut off all tree-trimming  
9 contractors, all line work, as soon as the particular job  
10 they were on was completed.

11 Q Okay.

12 During that period -- let's get more specific.

13 During that period of the earnings improvement  
14 program, was additional approvals required to use contractors  
15 in any way at Brunswick than in normal periods?

16 A Not to my knowledge.

17 Q Might it have been somewhere else in the company?

18 A It would have had to have been under me. It  
19 certainly wasn't over me.

20 Q I take it you don't know whether somebody  
21 under you may have issued such a directive?

22 A I never heard of it. But I can't make a posi-  
23 tive statement to that effect, no, sir.

24 Q On page 12 of your testimony, you state that  
25 in 1976 you made revisions in the way you evaluate employees

mpb5

1 and new applicants in regard to financial remuneration.

2 Does that mean that aside from -- even if we  
3 discount the cost of living increases, natural increases in  
4 salaries coming from cost of living increases, you pay more  
5 now than you did in 1976?

6 A Yes, sir.

7 Q You do?

8 A We pay more. Now when you put the cost of  
9 living on it, I can't break it down that way. But we do  
10 pay -- our salaries are higher now than they were in '76.

11 Q Well, let me ask you, in 1976 you saw a need  
12 to retain a consultant, a management consultant firm to  
13 evaluate your employee compensation plan?

14 A Yes.

15 Q Was that because you were having problems with it?

16 A No. This was trying to improve the way we  
17 did things. The other system, as far as I know, it was in  
18 effect when I came with the company, and there was no major  
19 change, maybe refinement, no major change.

20 We thought it was time to get outside experts  
21 in the area to look at what we were doing and was there a  
22 better way of doing it. We regularly bring in outside  
23 consultants to evaluate us. They are professionals, and we  
24 can't be professionals in everything. And we want to always  
25 improve and do things better. And it was in this spirit that

mpb6

1 this particular group was brought in.

2 Q There is testimony in the record that you are  
3 competitive with other utilities.

4 To the best of your knowledge in the area, do  
5 you also strive to be competitive with other employers of  
6 engineers and scientific personnel in the areas, such as  
7 those employed in the research triangle area?

8 A Not necessarily, because many of the ones that  
9 they would -- the type of individual they are looking for  
10 is not always the same type we are looking for. This is not  
11 100 percent true, of course.

12 We look at the area in general. We don't pick  
13 out -- we don't have enough competition in one company to  
14 pay special attention to it, would be my judgment of it.

15 Q Mr. Jones, you have no question that CP&L has  
16 the ability to meet the changing regulatory requirements of  
17 the Nuclear Regulatory Commission?

18 A Whatever they are, we're going to meet them  
19 satisfactorily. Don't ask me what it's going to be, but  
20 we're going to meet them, whatever they are.

21 Q And I take it the company doesn't have to have  
22 violations or be cited to know what's required in the regula-  
23 tions?

24 A Well, I hope not. But they are open to differ-  
25 ent interpretations, and I'm sure you know as well as I do

mpb7 1 that it's sort of a trial and error sort of thing to decide  
2 really what is the acceptable interpretation. And we go  
3 through this process all the time.

4 Q I see.

5 And in this trial and error interpretation and  
6 process you go through, do you always try -- and listen to  
7 my words carefully. It might be a little unfair way to say  
8 the question, but I want to say it this way:

9 Do you always try and push NRC as far as possible  
10 to get -- as far as that regulation will stretch any possible  
11 interpretation?

12 A Well, I don't think so. Now of course, this  
13 is my opinion, and of course I will admit it has to be biased.

14 Now let me explain our position on that.

15 We've been dealing with NRC since the early days  
16 and they've changed, just like we've changed guidelines.  
17 We know guidelines, you know, we hear proposed guidelines  
18 are coming out. Sometimes we send people up there to talk  
19 with them about it at that time. But when they come out  
20 we feel like that we know we have the ultimate responsibility  
21 for the safe operation of that plant.

22 I've never talked with NRC that they don't  
23 remind me again that we do have it. So that means we're  
24 accountable.

25 So what we want to do -- and we've got a lot of

mpb8

1 people. We think we've gone to a lot of trouble to bring a  
2 lot of expertise inhouse, and we've got a lot of experienced  
3 people. And we think that that input ought to get into an  
4 interpretation of a guideline.

5 We ask them to justify their position, and they  
6 sure make us justify ours. Sometimes we win, sometimes we  
7 lose, sometimes we compromise. But we think this is the way  
8 the process was intended to work initially.

9 Q Now you stated that the ultimate responsibility  
10 for the safe plant is on CP&L.

11 A That's what I've always been told, yes, sir,  
12 from the late '60s.

13 Q And you believe it?

14 A Yes, sir, they've pounded it into me.

15 Q Okay.

16 And the fact that NRC might have blessed the way,  
17 as you put it before, NRC blessed the regulation or blessed  
18 the way of doing something, does not take away your ultimate  
19 responsibility --

20 A Well, when they force something down my throat,  
21 the last thing they tell me is You are ultimately responsible,  
22 and there's no misunderstanding on our part.

23 Q You're aware that the qualify assurance regula-  
24 tions were first proposed in 1969, aren't you?

25 A '69 or '70, yes, that's about the period, yes,

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sir.

Q And they came into being -- they were adopted by the Commission about a year later?

A 1970, as I recall.

Q Right.

And can you, in relation to that, tell me when Brunswick 2 -- well, Brunswick first received a construction permit?

A '71, I believe.

February of '70, Mr. McDuffie says.

Q And the startup periods were quite a bit after that.

A Yes, it was, however you want to define it from -- well, I believe we started testing systems in early '74. The first systems I believe we tried to qualify -- late '73, about that period is when we started getting into testing the systems.

Q So the quality assurance regulations or requirements in Appendix B had been in effect for quite some time.

A Yes, sir. All interpretations of them hadn't quite been settled. We didn't quite appreciate the extensive documentation at that time. We've learned a lot since, and I guess we'll learn some more in the future.

A (Witness Banks) I'd like to add to that answer a little bit.

mpbl0 1

2 The QA requirements of Appendix B was in effect  
3 at that time. But it was also in that same period of time  
4 of '74 and '73 when the Commission decided to put out what  
5 was known as the Rainbow series that was testified to by  
6 them earlier, which gave the guidance on how to implement  
7 this program.

8 Q Mr. Banks, but let me ask you:

9 Even before that guidance there was an obliga-  
10 tion on CP&L to follow the program that was already in  
11 place.

12 A Yes, there was.

13 Q Now in building any complex project like a  
14 nuclear reactor there are going to be unforeseen problems,  
15 aren't there?

16 A (Witness Jones) Well, there always have been,  
17 even in fossil units, and that's very uncomplicated. We've  
18 all had our problems, yes, sir.

19 Q And you know that there will be many that one  
20 will impact on another, one unforeseen problem will impact  
21 on another.

22 A Yes, sir.

23 Q And you know that there are continuing regulatory  
24 requirements coming.

25 A This is right. We just don't know what they are.

Q Right.



mpb11 1

2 Is quality assurance for the economic building  
3 and operation of a nuclear plant synonymous with quality  
4 assurance for the safe operation of a nuclear plant?

5 A I think so, yes, sir.

6 Q Including releases of radiation, are they also  
7 synonymous?

8 A Over the long run, yes, sir, I think so, over  
9 the long haul.

10 Q From that point of view, do you believe CP&L  
11 would have a stricter program of quality assurance as it has  
12 inhouse without NRC regulations?

13 A If I've got to be honest, no, sir.

14 Q So quality assurance in the interest of CP&L and  
15 in the interest of the Nuclear Regulatory Commission are not  
16 really the same, there are differences?

17 A Yes. But NRC prevails and we recognize that  
18 and we do our utmost to come to whatever standards they  
19 require, yes, sir, mostly in the documentation area.

20 Q This is a general question to the panel. I don't  
21 know where it is.

22 How many engineers are there employed by CP&L  
23 in that classification?

24 MR. JONES: Mr. Chairman, may I inquire whether  
25 the question goes to all engineers employed by CP&L in any  
capacity, or in power plant operations, or in design and

mpbl2 1 construction?

2 MR. REIS: Well, my question is really directed  
3 to page 29 of the testimony. That raised the question to  
4 my mind, and it's a general statement.

5 MR. JONES: Which witness's testimony?

6 MR. REIS: Of Mr. Jones; and it's 183 professional  
7 engineers.

8 WITNESS JONES: Those are registered professional  
9 engineers.

10 BY MR. REIS:

11 Q I understand.

12 But they've taken the state test somewhere to  
13 be certified as professional engineers?

14 A (Witness Jones) This is right.

15 Q And I was asking how many engineers do you have  
16 as a whole?

17 A Well, we'll have to find that figure. There's  
18 115 in addition to these that are what we call the in-  
19 training status, you know, they have taken the exam that  
20 you take soon after you get out of school, but they haven't  
21 got the experience yet. But now that's still not the total  
22 number.

23 A (Witness Utley) Subject to check, I think that  
24 number would be 1134 in the operations group under Mr.  
25 Jones's supervision.

mpb13

Q Okay.

Now in order to make these figures on page 29 a little more meaningful to what we're discussing, how many engineers made applications to CP&L in 1978?

A According to my record in looking at degreed people that were employed out of college at the universities and people that were referred to CP&L for the '77-'78 period, there were 216 that accepted employment.

DR. LEEDS: That's engineers or just degreed people?

WITNESS UTLEY: This would be engineers -- wait a minute.

DR. LEEDS: Excuse me, Mr. Reis. I'm sorry.

MR. REIS: That's all right.

WITNESS UTLEY: Excuse me a minute, that does include technicians.

Subject to check, that would be 112 degreed.

BY MR. REIS:

Q Does that mean degreed engineers or degreed engineers and accountants?

A (Witness Utley) It's my understanding that's degreed engineers.

Q And how many engineers applied to you in that period?

A There were 245 offers, 113 rejections, and I hope

MFE/abl  
fls mpbl3

1 that totals up to 112 accepted.

2 Q You say you accepted 112.

3 MR. JONES: Your question was how many applica-  
4 tions.

5 MR. REIS: Right.

6 MR. JONES: It may be you're asking a question  
7 for which we don't have the answer right here with us. If  
8 the witnesses don't have those answers they might say so,  
9 and we could try to get them for you as quickly as we can.

10 WITNESS JONES: I thought I had them but I  
11 haven't been able to find them.

12 MR. REIS: Okay.

13 BY MR. REIS:

14 Q You talked about the 1977 and 1978 period. I  
15 was also wondering what period that was, how many months  
16 that was.

17 A (Witness Utley) According to my records-- Excuse  
18 me. Excuse me.

19 In finishing up this question we were discussing,  
20 there were 1490 referrals to CP&L.

21 Q Of engineering employees?

22 A Right.

23 Q And what do you mean by "referrals"?

24 A I interpret that to mean either people, head-  
25 hunters sending out offers, and also people that come to us

MPB/ab2

1 applying for a job directly.

2 Q I see.

3 And of that, you hired 112?

4 A 112. 89 would have been added to 1419; 23 would  
5 have been added to 216 coming out of colleges and universi-  
6 ties.

7 Q Now on page 30 of Mr. Jones' testimony there are  
8 figures on each particular group: power supply, engineering,  
9 construction, et cetera, the number of positions authorized  
10 and the number of positions filled.

11 Do you people have the breakdown for that, for  
12 engineering positions?

13 A (Witness Jones) No, I do not.

14 Q Or the technical scientific positions?

15 A I don't have the breakdown with me, no, sir.

16 Q In the period, Mr. Utley, in the period when  
17 Mr. Cantrell was at Brunswick, did anybody except the operations  
18 supervisor, did anybody in the supervisory positions have  
19 training on BWRs, except a short course that you offered in the  
20 fall of '76?

21 A (Witness Utley) It's my thought there were people  
22 at Brunswick that had training, BWR training, in various  
23 degrees. We had some people that had gone to the West Coast  
24 and taken training in their manufacturing facility, short  
25 courses.

MPB/eb3

1 We had also sent people for courses at Morris,  
2 Illinois, and I'm speaking from memory now in respect to the  
3 time period that Mr. Cantrell was there.

4 Q That includes --

5 A And we also had people at Brunswick that had  
6 functioned in the engineering and technical aspects of the  
7 work in the general office, supporting the plant's operation,  
8 both for the manufacturer and with the A-E that was relocated  
9 to the facility.

10 A (Witness Banks) Mr. Reis, I'm not sure I heard  
11 the question quite right. Did you ask if we had these  
12 people in the operating supervisors position?

13 Q No, I said aside from the operating supervisory  
14 positions and the other management positions, did any of them  
15 have training on BWRs.

16 A I'd like to clarify that. When we talk about the  
17 operating supervisor, that is one particular position.

18 Q Yes, I understand that.

19 A Okay.

20 And that man always had an SRO license.

21 Q I have no question about that. I was asking about  
22 the other top management officials at Brunswick in that  
23 period.

24 I take it from your testimony that you cannot  
25 recount right now that any of those officials had training

MPB/ab4

1 such as I indicated.

2 A (Witness Utley) I think they had training as  
 3 I described it in my answer to the question, and they met  
 4 ANCI standards in regard to the positions they filled, and  
 5 they were evaluated from a management standpoint to have the  
 6 capability to safely operate the facility.

MPB 2 fls

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1 Q Mr. Banks, previously there was testimony that  
2 the Applicant's Exhibits MM, NN, and OO, on the policy posi-  
3 tions of CP&L on nuclear safety, quality assurance, and  
4 health physics were given to people as part of a manual.

5 Can you tell us how thick that manual is?

6 A (Witness Banks) I'd have to speculate a little  
7 bit on the actual size of it, but I would suspect it  
8 probably has close to 60 to 75 pages in it.

7.330

9 A (Witness Jones) Mr. Reis, I have at least a  
10 partial answer to the question that I wasn't able to answer.  
11 I'll have to explain the way it's lined up.

12 This says "engineers" and I would surmise from  
13 the way it's laid out that it does mean right out of the  
14 colleges and universities. It's got a "public hall refers",  
15 that's 1419. That means our recruiters referred the paper,  
16 the application that you take from 1419 to appropriate  
17 line management.

18 Line management apparently brought in 354 for  
19 a visit. Line management made 205 offers. There was 113  
20 rejections and 89 acceptances. This was the year '78 accord-  
21 ing to the record.

22 A (Witness Utley) I think you'll find also added  
23 to that would be the ones coming out of colleges and uni-  
24 versities, which would be 23, which would be the same  
25 answer that I provided.



mpb2

1 Q Now going to page 8 -- it will be easier if  
2 you refer to your testimony, Mr. Utley -- on page 8 there  
3 you talk about operations quality assurance section. And  
4 how many professional people are in that section?

5 A Could I let Mr. Banks answer that? He's a little  
6 closer to it than I am.

7 Q Surely.

8 A (Witness Banks) At the present time there's five  
9 people in it.

10 Q And that's out of 424 in the generating depart-  
11 ment?

12 A The operating quality assurance group that we're  
13 talking about is the section that is in the general office  
14 that does an overall surveillance for the department level  
15 of the activities taking place in the operating plant. Each  
16 individual plant has their own operating QA.

17 Q Yes. That's in your testimony.

18 But in the total generating department in the  
19 central office there are 424 people.

20 MR. JONES: Mr. Reis, are you referring to the  
21 number on page 8 at line 23?

22 MR. REIS: Yes.

23 MR. JONES: And you're just confirming that they  
24 still affirm what they're saying on that line?

25 MR. REIS: Yes.

mpb3

1

WITNESS UTLEY: Yes, that's correct, as

2

stated in the testimony.

3

BY MR. REIS:

4

Q And now you state about in-depth surveillance of

5

plants.

6

How often are these in-depth surveillances

7

conducted? And that is on line 7 on page 8.

8

A (Witness Banks) They're set up that there would

9

be a minimum of one a month at each unit.

10

Q I see.

11

Is that at each nuclear unit, or is that includ-

12

ing -- do they also do quality assurance work at other plants?

13

A That's for the nuclear units only.

14

Q And of these five people, what percentage of

15

their time is spent at the facilities out in the field?

16

A I would have to speculate on that, and I don't

17

feel able to. They are in another section.

18

Q I see.

19

Do you know how or what they choose to look at,

20

or how they make their choice of what to look at?

21

A I know they review the NRC reports, they review

22

the corporate quality assurance audit reports, they review

23

all of the LERs that are sent in from the plant; they use

24

this data to help make a decision. I would suspect they

25

also have -- give an area that they assure that they cover

mpb4 1

on an annual basis also.

2

It would probably operate somewhere to an I&E operates that.

3

4

Q Going to page 10 -- let's skip that.

5

Now on page 13 they talk about the quality assurance supervisor, and I presume you're talking first -- well, let's talk of Brunswick.

7

8

How many professionals are on that staff?

442 9

WEL flws 10

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1           A       (Witness Banks) The supervisory, at Brunswick  
2 there are seven people. That's technicians and specialists.

3           Q       And that's of how many people employed at Brunswick?

4           A       348.

5           Q       Mr. Utley, in your position the emphasis is really  
6 on power production and the amount of power produced by the  
7 facility, isn't it?

8           A       (Witness Utley) Well, under my supervision comes  
9 the management of all power generation. Part of that is the  
10 nuclear generation, and I cannot separate the need to meet  
11 NRC requirements in regard to the operation of the nuclear  
12 plants in a safe, dependable manner from the standpoint of  
13 that being the best way to accomplish my primary responsibil-  
14 ity.

15          Q       Right. And you are told whenever the plants are  
16 down, you are immediately told if a plant goes down when  
17 it's not scheduled to?

18          A       I am informed of any significant happening at an  
19 operating plant, whether it be related to safety, operations,  
20 or whatever.

21          Q       And each day you get on your desk the next morning  
22 the plant load level report?

23          A       That's one of the pieces of paper that I get.

24          Q       And you similarly get reportable LERS that took  
25 place the day before?

wel 2

1           A       I stay current on the LER happenings, the trends,  
2 and whether or not we are making improvements or whether or  
3 not the progress is not what I look at as being desirable.

4           Q       What you're looking at, though, is trends, not  
5 daily occurrences?

6           A       Well, I think from my position, in order to make  
7 proper management judgments in regard to changes that need  
8 to be made in order to make improvements you cannot look at  
9 it on a day-to-day basis. You've got to look at the trends  
10 as to whether you're improving or whether you're not improving,  
11 and as far as getting a day-to-day report on LERs, I do not.

12          Q       Not the same way as the load production?

13          A       If an LER was of the significance to be of safety  
14 concern, I very well would be informed of it. But in the  
15 day-to-day routine operations, I do not get daily reports on  
16 LERs.

17          Q       There is talk here of bi-monthly meetings on  
18 safety matters. By bi-monthly, do you mean twice a month or  
19 every other month? The term is ambiguous.

20          A       Let's see, where are we in the testimony?

21          Q       I think it's someplace on page 16. Maybe not.

22                   (Pause.)

23                   Page 17, number 5.

24          A       As I recall, that is a bi-monthly report which  
25 would be once each two months.

wel 3

1 Q And you don't sit on the committee that generates  
2 those reports?

3 A No, I do not.

4 Q Now, I notice here that you receive correspondence  
5 from NRR, Nuclear Reactor Regulation, of NRC, regarding  
6 operating plants.

7 Who makes the determination of which correspondence  
8 you see and which you don't?

9 A Well, we have internal guidelines set up for  
10 distribution of NRC reports, and the reports that fall under  
11 this particular category come to my attention.

12 Q And what category is that?

13 A Well, for example, the report that came back from  
14 the plant as a result of the last QA inspection, that type  
15 correspondence comes to my attention, along with any other  
16 reports that really pertain to the safe operation of the  
17 nuclear plant.

18 In addition, I sign out all correspondence going  
19 to NRR.

20 Q Mr. Utley, in connection with that, I'd like you  
21 to turn -- I guess your counsel has -- Board Exhibit Number 11,  
22 and the letter from you to NRC, starting at page 44.

23 (Document handed to the witness.)

24 A That would be the letter dated March 17, 1976 to  
25 Mr. Moseley from me?

wel 4

1 Q That's correct. And in it is, under Infraction 1.a.  
2 talk of inadequate design review, on page 44.

3 A That would be Infraction 1.a., which you mentioned?

4 Q That's right. And in that connection a gage was  
5 the wrong height. The water column was only 10 inches where  
6 it was supposed to be at least 20.

7 A Yes. It was an improper gage installed to reveal  
8 the pressure that prevailed on the line.

9 CHAIRMAN SMITH: Wait a minute. Does everyone  
10 agree with the question and answer there?

11 WITNESS BANKS: The question was one thing, and  
12 the answer was another. The question was a water column  
13 setting on a loop seal; the answer was a gage installed, which  
14 is referred to in the report.

15 BY MR. REIS:

16 Q Was the gage installed --

17 CHAIRMAN SMITH: Would you read back the question  
18 and the answer, please?

19 (Whereupon, the Reporter read from the record, as  
20 requested.)

21 BY MR. REIS:

22 Q Was that a failure of quality control at the plant?

23 A (Witness Utley) It was an oversight, which I would  
24 term -- yes, was a failure of certainly quality assurance to  
25 pick it up.

CHAIRMAN SMITH: Mr. Reis, apparently everyone in

1 the room except the Board is happy with the question and  
2 answer, but I just want to put you on notice that we don't  
3 seem to understand it. Not that -- but, you know, it might  
4 be nice if we join you on it.

5 (Laughter.)

6 BY MR. REIS:

7 Q Mr. Utley, maybe I'd better ask you:

8 What was wrong with the gage as installed, as  
9 compared with that set out in the design for the plant?

10 A (Witness Utley) Well, the manufacturer recommended  
11 a zero to ten inch water column instrument. A 20.5 inch  
12 water column setting was selected for the loop seal isolation  
13 valve, and a zero to ten psid gage was installed to monitor  
14 the filter drop that was supposed to be measured by the  
15 zero to ten inch water column.

16 Now, this was an oversight in the design review  
17 that allowed the installation of the zero to ten psid gage.

18 Q What was wrong with the gage?

19 A Well, the pressure on the gage was really not  
20 the proper range, and also a water column was supposed to be  
21 installed.

22 Q Did you write this letter?

23 A No, I did not write it.

24 Q Do you agree with the material contained on page  
25 2 -- and I quote from about the twentieth line down in the



Wel 6

1 first paragraph, or partial paragraph:

2 "Carolina Power & Light Company does not agree  
3 that the discrepancy in the loop seal installation is  
4 indicative of a failure of CP&L's Quality Assurance Prog-  
5 ram, either from the standpoint of the design review  
6 process or the construction and installation process."

7 A Well, I would think that was written on the basis  
8 that it was a design review problem that related to a quality  
9 assurance problem.

10 Q I see. And the infraction cited is a design review  
11 problem?

12 (Pause.)

13 A Well, I think the letter is clear in regard to it,  
14 and, again, we get into the situation of interpretation as to--

15 Q In other words, you don't feel this is a quality  
16 control problem at all?

17 A I did not say that, per se. In regard to the  
18 situation where there was an oversight made it was a quality  
19 assurance or quality control problem in a phase of the design  
20 and engineering of the plant.

21 Now, where you place the responsibility for that  
22 oversight I think can be discussed. It does not in any way  
23 make me take the position that it should have happened. I  
24 certainly would take the position that things of that type  
25 should not occur, and I don't think it would be proper for

wel 7

1 me to sit here and try to defend that it should not occur --  
2 I mean that it should occur.

3 Q And part of the problem came about from piping cut  
4 to the wrong size?

5 A I do not recall the details of this total problem  
6 as they prevailed with respect to the total situation, and  
7 I have not read this letter through to refresh my memory on  
8 it. We're talking about a letter that was written three years  
9 ago.

10 Q Okay.

11 Going to page 46, or the top of page 3 of that  
12 letter -- and I'll give you a minute to read it --

13 A Is this the first paragraph we're talking about?

14 Q That's right, on page 3.

15 (Witness Utley reviewing document.)

16 Have you read that paragraph, Mr. Utley?

17 A Yes.

18 Q And there was tape on a vent line, was there not?

19 A That's what the letter says, yes.

20 Q And the tape was not supposed to be there?

21 A That's correct.

22 Q Was the tape being there a failure of quality  
23 control in the plant?

24 A I would not know whether it was a failure of  
25 quality control in the plant, or whether it was a failure of

wel 8

1 quality control on construction, or just where the responsibil-  
2 ity should lie in respect to the control of the installation.  
3 I do agree that better control should have been administered.

4 Q Therefore, it doesn't matter, as it says in the  
5 last sentence, whether the tape was affixed following the  
6 final quality control inspection or after it.

7 A Well, the letter says it can only be assumed that  
8 the tape was affixed following the QC inspection.

9 Q Does that make any difference from the point of  
10 view of CP&L's responsibility for that tape being there?

11 A Oh, certainly. It's our responsibility.

12 Q In either event?

13 A Yes, sir.

14 Q Okay.

15 A We in no way absolve ourselves of that.

16 Q So that the sentence doesn't have much meaning  
17 with respect to CP&L's obligations for quality control?

18 A Well, let me say that Carolina Power & Light  
19 Company management in no way sanctions inadequate quality  
20 control or assurance.

21 This is not to say that occasions happen whereby  
22 things fall through the cracks, particularly when you're  
23 looking at an installation the size of the Brunswick plant.  
24 Our quality assurance program does not always measure up to  
25 our expectations, and we are continually trying to improve it,

wel 9

1 and we will continue this process as we go into the future.

2 Q Do you still believe there was no basis for the  
3 citation set forth in that letter on the basis of the answers  
4 you've just given me?

5 A Well, we in turn responded to the citation, and  
6 we also supported our position in regard to the infraction.

7 Q Do you feel you were just being argumentative in  
8 the letter in setting forth these things, that everything was  
9 fine at the sign off, but, gee whiz, we're not going to say  
10 anything about what was discovered in the inspection?

11 A No, I don't look at it in that light.

12 I think the last paragraph of our letter pretty  
13 well sums up our position, although we have stated that  
14 several of the citations as specified cannot be supported by  
15 available documentation. We admit up to the fact that it  
16 doesn't measure up. We recognize the underlying concerns of  
17 the Commission. We realize your position, and we don't  
18 disagree with it.

19 "All plant equipment should be capable of performing  
20 its intended function as designed, and that the installed  
21 equipment meet the design specifications. To that end we  
22 intend to investigate our Quality Assurance Program to see if  
23 there are changes that can be made to strengthen it and  
24 thereby avoid recurrence of the types of deficiencies brought  
25 out by our investigations of this incident."

wel 10

1           And I think that's consistent with our continuing  
2 effort. We don't want to leave the impression that we are  
3 in any way trying to discredit NRC findings. We take them  
4 very seriously, and many of the changes that take place, that  
5 have taken place. And I will give credit to improvements  
6 that have been made in Brunswick are direct results of NRC's  
7 dedicated, in-depth inspections, and we by no means, I hope,  
8 will ever fail to take advantage of mistakes that we make,  
9 because that is the primary basis on which we make progress,  
10 is taking advantage of our mistakes.

11           CHAIRMAN SMITH: Are you leaving that point, Mr.  
12 Reis?

13           MR. REIS: I thought, when read against the letter,  
14 it is pretty clear that -- well, I thought I could make my  
15 point with the documentary evidence and the letter itself.  
16 I didn't see any need to explore it further.

17           CHAIRMAN SMITH: Well, I just have an uneasy  
18 feeling that somehow everything didn't fall into place on  
19 this exchange between you and Mr. Utley, and I'm not quite  
20 sure how I understand the exchange.

21           As I understand it, the citation is that, contrary  
22 to quality assurance requirements, there was a taped vent,  
23 and Mr. Utley says, in effect, well, maybe there was a taped  
24 vent line, but not contrary to quality assurance requirements,  
25 and he doesn't say anything else about it.

1 Is that the summary?

2 MR. REIS: Well, I read it as he says when you  
3 take it with what's in the letter, that they've met their  
4 quality assurance at the time the plant was put into operation.  
5 It passed quality assurance then, and that's it, and that's  
6 the end of their responsibility for quality assurance.

7 That's the way I read it.

8 CHAIRMAN SMITH: And so it stopped there, but they  
9 never go to the point of explaining --

10 MR. REIS: Well, he has also said, with credit to  
11 Mr. Utley, that, yes, they have a continuing obligation for  
12 quality assurance.

13 My point was that in some of their correspondence  
14 to NRC, at least in this letter, they seem to avoid directly  
15 facing that.

16 CHAIRMAN SMITH: And this is my concern too.  
17 They say, no, this taped vent line is not an indication, as  
18 I understand it -- and I'm paraphrasing very crudely here,  
19 I recognize, Mr. Utley -- that this incident is not a  
20 reflection upon the quality assurance program, but in any  
21 event we're going to make sure that our quality assurance  
22 program is improved so it doesn't happen any more.

23 WITNESS UTLEY: Well, I wouldn't disagree that it  
24 doesn't tend to play down the significance of the problem as  
25 it relates to quality assurance. I accept full responsibility

wel 12

1 for that.

2 But by the same token I think when you read the  
3 last paragraph of the letter in regard to the fact that we  
4 will go back and we will look at the quality assurance program,  
5 we will do what's necessary to continue to improve quality  
6 assurance, to try to prevent such things as this type from  
7 happening, and that is my sincere position in regard to  
8 quality assurance today and in the future.

9 CHAIRMAN SMITH: But there was never an explanation  
10 of how it happened.

11 (Witness Banks shrugging shoulders.)

12 You don't know. Okay.

13 WITNESS UTLEY: We have no way in the world of  
14 knowing just how it might have happened.

15 CHAIRMAN SMITH: All right.

16 BY MR. REIS:

17 Q Mr. Banks, who handles regulatory compliance and  
18 licensing for CP&L?

19 A (Witness Banks) Who handles regulatory compliance  
20 and licensing?

21 Q Yes.

22 A I'd like for you to define what you're saying,  
23 because many of us handle different portions of different  
24 things. We have a nuclear licensing group, which is in another  
25 department; the generation department has some people that

wel 13

1 do some . . .

2 Q Well, who handles the licensing that you just  
3 mentioned?

4 A Who is responsible for licensing?

5 Q Yes.

6 A That comes under our tech services department,  
7 which is under Mr. McDuffie.

8 Q I see. And compliance is under Mr. Utley,  
9 principally under Mr. Utley?

10 A (Witness Utley) Compliance, as it applies to the  
11 operating plants, is under my responsibility. Mr. Barks is  
12 manager of nuclear generation and has the direct responsibility  
13 for compliance as it relates to the operating nuclear plants.

14 CHAIRMAN SMITH: I think it's time to be concerned  
15 about the need for an evening session. Does everyone agree?  
16 Would it be timely if we wait until the normal time for the  
17 afternoon break for you to attend to that?

18 MR. GORDON: That'll be all right.

19 BY MR. REIS:

20 Q Gentlemen, on page 40 you indicate some growth in  
21 NRC requirements that affected the construction of Brunswick.

22 How did Appendix K, which you list somewhere here,  
23 affect that?

24 MR. JONES: Mr. Reis, if you have page references  
25 where these things have been discussed in their direct



wel 14

1 testimony, I think it would speed things along if you would  
2 cite them, so that we wouldn't have to sit here and look  
3 through for the pages.

4 MR. REIS: It's on page 42, line 3.

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MR. JONES: It looks like it's on page 46.

3

MR. REIS: Page 42, line 3.

4

MR. TROWBRIDGE: Page 46 is an elaboration.

5

BY MR. REIS:

6

Q So your point is, essentially, that it required the plant to be licensed by the end of -- by December 27th of 1974?

7

8

A (Witness Banks) Doesn't page 46 answer your question?

9

10

Q Before the issuance of Appendix I, which you refer to on page 43, what was CP&L's goals with respect to the release of radioactivity?

11

12

13

A The goals were to meet design criteria that were laid down prior to that. We were designing, in effect, to what was laid down prior to that time.

14

15

16

Q You didn't have any internal goals within the company itself of keeping radiation as low as reasonably achievable?

17

18

19

A (Witness Utley) I would say that we certainly had goals to maintain levels that was of no harm to individuals, workmen, or anyone, and complied with the design criteria as outlined by Mr. Banks.

20

21

22

23

CHAIRMAN SMITH: You seem to be wary of this question, because you answer it somewhat differently than the question was presented.

24

25

WRB/wb2

1                   How about the standard of as low as reasonably  
2                   achievable?

3                   WITNESS UTLEY: Well I think there's a degree to  
4                   which you go that is reasonable, over and beyond what is  
5                   safe. And I think my position, as I view it, is that we  
6                   were going sufficiently -- to a sufficient degree to assure  
7                   safety. And to go beyond, to the degree we have been  
8                   required to go by Appendix I,--

9                   CHAIRMAN SMITH: That's a little bit different.

10                  WITNESS UTLEY: --is over and beyond what at  
11                  that time we looked at as being a requirement.

12                  CHAIRMAN SMITH: That's somewhat different.

13                  BY MR. REIS:

14                  Q        On page 45 you address the burdens put on you  
15                  by new security requirements in 1974. And that was simultane-  
16                  ous to the licensing of Unit 2, or just about at the same  
17                  time.

18                  A        (Witness Banks) That's right.

19                  Q        Was your security done by a contractor, or in-  
20                  house at that time?

21                  A        The guard force is a contractor, but putting in  
22                  the equipment, the management of the guard force, that's us.

23                  Q        I see.

24                  Was the guard force increased at that time?

25                  A        The guard force was increased. There was

WRB/wb3 1

additional security required on additional doors.

2

Q And how long a lead time did you have to do that?

3

How long before it was a requirement did you know it was going

4

to be in place?

5

A I can't remember the exact time. But the security

6

system, the computer system, the fencing, I'd suspect that

7

was about twelve months prior to being in place that we were

8

aware of the size of it, and the additional engineering and

9

the construction work that had to take place.

10

A (Witness Utley) I think it would be agreed that

11

we put in one of the most sophisticated security systems

12

that was available in the industry at the time in complying

13

with these regulations.

14

On page 41 you talk about the arbitrary deadline

15

of December 28th, 1974. I think in essence this has been

16

covered before. But that wasn't arbitrariness on the part

17

of NRC, you're not saying that; the deadline was chosen by

18

CP&L?

19

A From my viewpoint it was arbitrary on the part

20

of NRC, if we were going to license that plant to operate

21

without having to have an ECCS analysis redone on the plant.

22

Q I see.

23

And it was G.E.'s failure that caused the ECCS

24

not to pass?

25

Q It was a problem that prevailed in regard to NRC

WRB/wb4

1 accepting G.E.'s model as being appropriate for this.

2 Q TDo you have any information to give us here  
3 that the G.E. model should have been accepted, that it was  
4 proper?

5 A I do not have any.

6 A (Witness Jones) We don't have any. And we can't  
7 take that position.

8 Q Mr. Banks, going to the HPCI door that we heard  
9 so much about, there's testimony in the record that the  
10 door -- that at least one of the doors was disabled and could  
11 not be closed. Do you know who caused that to happen?

12 A (Witness Banks) No, I do not.

13 Q Do you know how long that condition existed  
14 before it was discovered?

15 A In accordance with the NRC interpretation, I'll  
16 take the same interpretation: the instant it happened was  
17 the moment you become aware of it.

18 Q I'll ask you the question: Do you know how  
19 long the condition existed before it was discovered?

20 A I became aware of it when Mr. Cantrell identified  
21 it.

22 Q And you have no idea how long it existed before  
23 Mr. Cantrell identified it?

24 A I have none.

25 Q In looking at your past testimony there's something

ARB/wb5

1 about security doors and bulkhead doors. Are they the same  
2 on the plant?

3 A The HPCI door is not a security door, if that's  
4 what you're asking. We've got many doors, and many of the  
5 security doors can be a bulkhead door.

6 Q When the door was found open on the first occasion  
7 and on the occasion in 1977, was there anybody in the room  
8 down there working?

9 A As I recall the way it was reported, there was  
10 not.

11 Q You stated before that there were more significant  
12 safety requirements and things more pressing to be done than  
13 alarming those doors. Could you detail what those items were?

14 A I'd have to go back and dig out all of our work  
15 items, all the things we were doing.

16 When we decided to put the alarm on the door we  
17 put it in with the fire protection program. And I think the  
18 total fire protection program is just as important, or a  
19 more important safety item than one particular door.

20 Q Is each component of the fire protection program  
21 more important than the door?

22 A The total fire protection program is not completed.  
23 It's being done by pieces. This piece on the doors is  
24 finished. There are still other pieces that will be worked  
25 on the remainder of this year.

WRB/wb6 1

2 Q Can you detail any other significant safety  
3 problems that you've had that you thought took precedence  
4 to alarming these doors?

5 A I haven't really said that this was a significant  
6 safety problem.

7 Q Well you said there were other more significant  
8 safety requirements that--

9 A That's right.

10 Q What were some of them? What were some of the more  
11 significant safety problems that you worked on?

12 A Which period of time would you like for me to  
13 discuss some of them?

14 Q From '77 until the end of '78. From September,  
15 1977 until the end of '78. Just list a few.

16 A Well we've already discussed we've been working  
17 on the security systems, changing, upgrading. We have had  
18 problems with the reactor water cleanup systems. We have  
19 replaced core spray piping.

20 Is that enough.

21 Q In the HRH rooms are there telephones? --RHR  
22 rooms; I'm sorry. In the RHR rooms are there telephones?

23 A I would suspect there's a paging system in there.  
24 Right offhand I can't recall seeing any. But the way our  
25 plants are designed we try to make those available in hearing  
distance to everyplace in the plant.

WRB/wb7

1 DR. LEEDS: Mr. Reis, why don't you define for  
2 the record what an RHR room is and where it is in relation  
3 to the HPCI doors?

4 MR. REIS: Residual heat removal system. And  
5 I'm informed -- and correct me if I'm wrong -- that these  
6 HPCI doors went between the HPCI compartment and the compart-  
7 ment where the equipment was for the residual heat removal  
8 system.

9 BY MR. REIS:

10 Q Is tht right?

11 A (Witness Banks) That is some of the equipment  
12 that is in that room.

13 Q Were the wires to this paging system that you  
14 refer to -- could they have been also used to install  
15 annunciators on that door?

16 A I'm not an electrical engineer, I don't think I'm  
17 qualified to answer.

18 Q You talked about sump alarms down there in that  
19 area, did you not, earlier?

20 A That's correct.

21 Q And do you know whether those alarm systems  
22 could also have been used to alarm the doors?

23 A I would have to get an engineer to review it and  
24 tell me whether it could or not.

25 CHAIRMAN SMITH: So the answer is No?



WRB/wb8 1

WITNESS BANKS: The answer is No. I can't

2 answer it.

3 BY MR. REIS:

4 Q Did you ask any engineer to look into that and  
5 see whether existing wiring going into that room could provide  
6 a system to alarm those doors?

7 A (Witness Banks) Not specifically.

8 Q Would those sump alarms tell you whether those  
9 doors were left open in the normal course of a day?

10 A No. But they would tell me if there was flooding  
11 down there.

12 Q But they wouldn't tell you necessarily in a  
13 situation where you had to activate the ECCS system, would  
14 they? Or when the ECCS system would be activated, they  
15 wouldn't tell you whether there was flooding before that  
16 when the doors were open?

17 A I stated they would not tell me if the doors were  
18 open. So I don't understand the question.

19 Q Has there ever been any flooding, or water in that  
20 basement area there?

21 A It's been a continuing problem.

22 Q I see.

23 How deep has it gotten?

24 A I would expect we've probably had a foot and a  
25 half of water on the floor down there.

WRB/wb9 1

2 Q Did that water ever disable any safety equipment  
down there?

3 A The moisture down there has affected some of  
4 the instrumentation down there. It has put the plant into  
5 an LCO condition.

6 MR. REIS: Will you read my question back, please?

7 (Whereupon the Reporter read from the record  
8 as requested.)

9 BY MR. REIS:

10 Q Can you answer the question?

11 A (Witness Banks) Well how are you using the term  
12 "equipment?" I said instrumentation was, yes.

13 Q Do those doors perform a safety function in the  
14 plant in your opinion?

15 A I do not think the doors are necessary to prevent  
16 a safety problem to the general public.

17 Q To the general public, you said?

18 A That's right. And that is what nuclear safety  
19 is set up on.

20 I would affect the operation of the plant and  
21 be a financial problem to CP&L.

22 Q Did CP&L ever represent in its PSAR or FSAR that  
23 the doors should be kept shut and that those compartments  
24 should be maintained watertight?

25 A It was put in the FSAR that these doors would be

WRB/wb10

installed to maintain water integrity in the area.

2 Q Could the fact that the doors were left open  
3 disable dual mode safety systems?

4 A Not the fact that the doors were left open.  
5 There would have to be many other incidents take place also.

6 Q Like flooding in the chamber?

7 A Like flooding in the chamber.

8 Q And what other things?

9 A Are you assuming that nothing else works?

10 Q Yes.

11 A Well, you could float the plant away.

12 Q You testified before about the sump alarms.

13 What was the relevance of the sump alarms to safety of the  
14 plant in case of an emergency? You said the sump alarms  
15 would tell you if there was water down there, and they would  
16 go off.

17 What is the relevance of this in the event of an  
18 ECCS incident?

19 A It has nothing to do with an ECCS incident. It  
20 is for the operator to know the condition of his plant. It  
21 alerts him if he happens to have flooding down there; which  
22 has no bearing whatsoever on the ECCS.

23 Q If you need the residual heat removal system,  
24 would it continue to work if it was flooded?

25 A I assume that you have now put about eight or ten

WRB/wb11 1

2 feet of water down in that big room now, and no other action  
3 has been taken.

4 Q -And the water could transfer from compartment  
5 to compartment through open doors; isn't that so?

6 A That's correct.

7 Q And that would-- Are there two residual heat  
8 removal systems?

9 A That's correct.

10 Q And that could lead to a disabling of both the  
11 residual heat removal systems?

12 A That is correct.

13 MR. JONES: Mr. Chairman, in order to be assured  
14 that we're going to be able to meet tonight, I wonder if it  
15 would be appropriate to take a break so we could get that  
16 settled.

17 CHAIRMAN SMITH: I think it would be appropriate  
18 when he comes to the end of a subject matter. And then before  
19 he goes to the next one we'll take our break.

20 MR. REIS: That's all I had on the HPCI doors.

21 CHAIRMAN SMITH: I have one question.

22 These HPCI doors I have heard described as being  
23 what you might see on a ship, and they have gaskets and they  
24 have levers called "dogs" to tighten them down. And you open  
25 them and you step through them.

WITNESS BANKS: It's not quite the same. But that's

WRB/wbl21

close, that's a close resemblance to them.

2

CHAIRMAN SMITH: They are oval shaped?

3

WITNESS BANKS: No, these are rectangular.

4

5

CHAIRMAN SMITH: And then there is a threshold which comes up off the floor, as I recall, an easy stepping distance.

6

7

WITNESS BANKS: They don't have the threshold that you have on a ship-type door.

8

9

10

CHAIRMAN SMITH: So eighteen inches of water would go through the door, then?

11

12

WITNESS BANKS: I don't remember the exact distance.

13

14

15

CHAIRMAN SMITH: Well necessarily if the threshold is at floor level any inches of water would flow through the door.

16

17

WITNESS BANKS: You have to remember, also, down in this space there are sumps located lower than floor level.

18

19

CHAIRMAN SMITH: So the flooding referred to was not necessarily at the level of the doors, then?

20

21

22

23

WITNESS BANKS: No. Most of the water that ends up down there is in the sump. The cases that I referenced where we had eighteen inches was up on the floor level. And it was eighteen inches across the whole area.

24

25

DR. LEEDS: Were the sump alarms going off when you had eighteen inches of water above the floor level?

WRB/wb13 1

2 WITNESS BANKS: We had the alarms. That's how  
the people were there taking action on it.

3

DR. LEEDS: Did they shut the door?

4

5 WITNESS BANKS: At that time I don't believe the  
doors were open.

6

CHAIRMAN SMITH: When this happened--

7

8 WITNESS BANKS: Sir, before you ask:-- As I  
stated, we have had water down there on many occasions.  
9 It's not unusual. Because this is a sump area. All the  
10 drains in the reactor building go to these sumps. Any type  
11 of leakage in that building floor drainage ends up in that  
12 area.

13

CHAIRMAN SMITH: That's the purpose of it?

14

WITNESS BANKS: That's the purpose of it.

15

16 CHAIRMAN SMITH: My question was: When the  
incident that you just referred to happened, what phase of  
17 administrative controls were in effect at that time?

18

19 WITNESS BANKS: The shift checking by the  
auxiliary operators to assure that the doors were shut.

20

21 CHAIRMAN SMITH: Which is the phase of control  
that was immediately succeeding the annunciator light? That  
22 was the highest phase of administrative control?

23

24 WITNESS BANKS: That is the highest phase that  
we have gotten to until we put the annunciators on.

25

CHAIRMAN SMITH: Are there any more questions

WRB/wbl41

on this subject? If not, we'll take our recess, then.

2

Let's take a ten-minute recess.

3

(Recess)

Mr WRBloom  
Lagel on file

4

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MPB-3

fls WRB

abl 1

CHAIRMAN SMITH: On the record.

2

BY MR. REIS:

3

Q Mr. BANKS, I would like to spend a moment on the diesel generators and the oil contamination problem, contamination with lubricating oil.

6

Do you have a chemistry lab at Brunswick?

7

A (Witness Banks) Yes, we have.

8

Q Does it have the capability of doing the viscosity tests on oil?

10

A I would have to speculate on that. So I don't know. As far as doing a simple type comparison thing with a limited accuracy, I think any good lab man can do that.

13

Q Were the drums that were in the diesel building from which the oil was taken and added to the lubrication oil labeled in any way?

16

A I believe that those drums were labeled as lube oil which was normally used for those diesel engines.

18

Q But there was not lube oil in those drums.

19

A That's what the testimony states, and also the infraction report that was -- that we submitted to the Commission.

22

Q Turning to page 53 of your testimony, Mr. Utley and Mr. Banks, you speak in the first full paragraph there about a higher turnover rate and you say those replacements were always fully qualified.

23

24

25



MPB/eb2

1                   Were the replacements in all cases as qualified  
2 as those who left?

3           A       As far as the experience level, as I said earlier,  
4 they did not all have the same experience level as the man  
5 that they replaced.

6           Q       Did you take any steps to retain these employees  
7 when they announced they were leaving?

8           A       (Witness Utley) I'm not sure what steps would  
9 be appropriate under the circumstances. I mean it was a  
10 situation where people were interested in relocating. They  
11 found other positions and they informed us that they were  
12 relocating, those that did relocate.

13                   And as has been testified to, some of those  
14 people since found out, CP&L was a pretty good place to work,  
15 and they've come back, and as a result of this, they are  
16 really better employees than they were before.

17           Q       Did you try to make it more attractive to them  
18 to stay?

19           A       We don't make it a policy to try to buy people  
20 for a situation under those circumstances. It doesn't make  
21 for good morale. It upsets your over-all management pay  
22 policy. It's just not a reasonable management practice.

23           Q       On page 57, on line 14 you say:

24                   "The bulk of the LER's submitted have  
25 been of the less serious thirty-day reportable

MPB/eb3

1 variety...."

2 Can you give us the breakdown of the percentage  
3 of 14- and 30-day LERs? Do you have that?

4 A (Witness Banks) Would you like me to give you  
5 by years the numbers of 14-day LERs for the Brunswick units  
6 as individual units or as a plant?

7 Q By individual units.

8 A All right. I will start with Unit No. 1.  
9 For the year 1976, there was one.

10 Q That was 14-day?

11 A 14-day.

12 For 1977, there were six.

13 For 1978, through May -- I haven't had it updated --  
14 there was one.

15 For Brunswick No. 2, in 1975 there was 24.

16 In 1976, there was 20.

17 In 1977, there was eight.

18 Up to May of 1978, there was one.

19 Q Were any of these LERs for more than one failure  
20 or one instrument failure, do you know? Can you say from what  
21 you have here?

22 A From the data I have here I can't say.

23 Q Do you know of your own knowledge?

24 A I can't say.

25 A (Witness Utley) I can't say on the 14-day.

MPB/ab4

1 I can say there have been repeatable LERs on  
2 certain instrumentation. Now whether they were 14-day or  
3 30-day I'm not qualified to say at this time.

4 Q I see.

5 I see on Unit 2 there's been a substantial drop  
6 between '75, '76, '77 and '78. What was the cause of the  
7 large number of 14-day reportable instances in '75 and '76?  
8 Was there a pattern to them? Were they of one type?

9 MR. JONES: Mr. Chairman, may I inquire if  
10 Mr. Reis has the answer? This is all information that's  
11 available to the NRC, obviously.

12 And if there's a particular point you want to  
13 make it would be easier to ask a question.

14 MR. REIS: The only reason I asked was that I  
15 thought to get a balanced picture in the record here because  
16 there is a notably drop, it might be well to put it in.  
17 I could just as soon pass it if it's not readily available.

18 MR. JONES: Apparently they don't have it right  
19 at their fingertips.

20 MR. REIS: Okay.

21 BY MR. REIS:

22 Q Let's go to page 59 of the prefiled testimony.  
23 And I take it what you outline here are the steps that-- It  
24 starts on page 58 at the bottom of the page -- are the steps  
25 that go into the reporting of an LER at Brunswick.

MPB/eb5

1 A (Witness Banks) That's correct.

2 Q Tell me if I'm correct in this.

3 First it's reported -- it's discovered by some-  
4 one, by one employee. Is that correct?

5 A Correct.

6 Q Okay.

7 Then if he is not a foreman or an operator, he  
8 has to report it to a foreman or an operator. Is that correct?

9 A That's correct.

10 Q And then the foreman or operator makes a decision  
11 of whether to report it to the operations supervisor or the  
12 operations and maintenance superintendent or the regulatory  
13 coordinator? There's a decision made there.

14 A I don't think it is a decision for the operator  
15 to make. If it is that type of condition, he is required to  
16 do it.

17 Q I see.

18 But he decides whether it is that type of condi-  
19 tion. If somebody tells him something and he doesn't think  
20 it's that type of condition he just doesn't report it?

21 A I would hope that he investigates the condition  
22 to determine whether it is or is not, not just on somebody's  
23 word.

24 Q I see.

25 And then it's on that person to indicate whether

MPB/eb6 1

an LER should be submitted. He doesn't, at that level, either have the ability to get an LER submitted, it just indicates whether he thinks it should be.

2  
3  
4 A That's correct.

5 Q And it's on the regulatory coordinator to make the determination.

6  
7 A What we're talking about is a limiting condition for plant operation that was discovered. All limiting conditions for plant operation are not reportable by LERs. We have an individual at the plant which is knowledgeable of this area. It's his responsibility to be sure that management is making the right decision to review the regulatory requirements against the LCO condition to determine whether or not it is a reportable condition.

8  
9  
10  
11  
12  
13  
14  
15 Q So in other words, when it goes up to the regulatory coordinator as LCO condition, he is the one who determines whether it's an LER.

16  
17  
18 A He would determine that and I think he also reviews our trouble tickets. He reviews the logs to see if there may be some other thing that has happened, other than that, that would fall into the same category.

19  
20  
21  
22 Q I see.

23 The regulatory supervisor then prepares-- If he decides it's an LER, he prepares a draft LER report.

24  
25 A That's not quite true. If there is an LER based

MPB/eb7

1 on a condition, the foreman for that particular area would  
2 put together the draft report.

3 Q Okay.

4 But it's the regulatory coordinator who would  
5 forward it -- decide whether to forward it to Operations and  
6 Maintenance and the plant manager.

7 A That's correct.

8 Q And the plant manager then reviews it and deter-  
9 mines whether to go to the Generation Department?

10 A Correct.

11 Q And previously who did you say was the head of  
12 the Generation Department?

13 A In this particular case, right now Mr. Furr is  
14 head of the Generation Department. But what he is really  
15 saying is that they are forwarded to me.

16 Q And he makes the final decision, and then it's  
17 sent to the Plant Nuclear Safety Committee?

18 A That's right.

19 Q Is the regulatory coordinator a trained RO or SRO?

20 A The man in the position right now is an RO.

21 Q I see.

22 So before an LER is submitted, I take it from  
23 this testimony, it goes and gets the approval of about seven  
24 layers of people in the Brunswick plant.

25 A I haven't counted the layers but there are many

MPD/ab8

1 steps that it has to go through to be sure that it is re-  
2 portable, that it's factual, and that necessary corrective  
3 actions have been taken.

4 Q Now any one of these people at any one of these  
5 intermediate steps can veto it, in effect.

6 A That's correct.

7 I'd like to add that once a condition is started  
8 off, it is documented, the results of that is documented,  
9 whether it was vetoed or whether it was carried on, and those  
10 are available for I&E inspectors to review at any time at the  
11 plant, which they do on almost all inspections.

12 CHAIRMAN SMITH: That's from the very first  
13 moment of discovering of such a condition?

14 WITNESS BANKS: Once it gets to the Nuclear  
15 Regulatory Coordinator, he puts the number down and lists it  
16 as one to go.

17 CHAIRMAN SMITH: When it arrives at that level  
18 then it's docketed and available for inspection?

19 WITNESS BANKS: Right. But he does review the  
20 daily operating logs and trouble tickets, so he may pick it  
21 up-- The other people may have discussed it and may have  
22 dropped it, but he may pick it up again if he felt it was  
23 something --

24 CHAIRMAN SMITH: We're talking about availability  
25 to I&E.

MPB/eb9

1 WITNESS BANKS: Well, the logs are available to  
2 them as well, and the trouble tickets.

3 BY MR. REIS:

4 Q Does the Corporate Nuclear Safety Committee have  
5 any input into this process?

6 A (Witness Banks) The Corporate Nuclear Safety  
7 section -- it's not a committee -- does surveillance of our  
8 activities and looks over what we're doing, the same as  
9 Corporate Quality Assurance do.

10 Q But they don't have input into a determination  
11 on whether an LER should be submitted, an individual LER?

12 A No. They review the after-the-fact documents  
13 the same as NRC, and if they do not agree with our inter-  
14 pretation, then we have to convince them we were right or if  
15 they say we were wrong, then we will proceed with it as if  
16 it was an LER.

17 Q Okay.

18 And how about your Operations Quality Assurance  
19 group, do they have an input into individual LERs?

20 A The supervisor for Quality Assurance is on the  
21 Plant Nuclear Safety Committee as well as they do have  
22 surveillance responsibility to assure we're following our  
23 procedures.

24 Q To what extent do you make use of LERs reported  
25 at non-CP&L facilities to prevent problems at CP&L facilities?



MPB/eb10

1 Is there a structured way of doing that within CP&L?

2 A Yes, there is, and I think we address it -- I  
3 don't know exactly where in our testimony.

4 But under Mr. McManus, who will be on here later,  
5 they review in the Corporate Nuclear Safety, the computer  
6 tapes of all of these that are put out by NRC and compare  
7 them against ours, and what the trends are.

8 I think he could better address in more detail  
9 how thorough they go through these and what they do. And they  
10 would report them to us in Operations if there were some  
11 actions he felt we should be taking.

12 A (Witness Utley) And I also follow the trends of  
13 what ours are running as compared to other companies so I  
14 can tell where we are in respect to the industry, in an effort  
15 to try to get a record that is really superior to the over-  
16 all industry.

End mpb3

17

18

19

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4Madelon  
mpbl  
1.222

1 Q Mr. Banks and Mr. Utley, on page 61, I take it  
2 you indicate there, starting at about line 18 to the bottom  
3 of the paragraph, that you reduced the LERs by resetting set  
4 points.

5 Is that the purport of your testimony there?

6 A I think Mr. Banks can speak to that in detail  
7 better than I can.

8 A (Witness Banks) That portion of it does  
9 identify that we did reset the set points on our instru-  
10 ments, which was a reduction. Our set points were set at  
11 the limits that were arrived by tech specs, with no band  
12 for drift in operations. Upon doing additional PTs we would  
13 find that they would drift out of the band that they were  
14 allowed to. So as we got experience and found out what  
15 their drifts were, drift rate, we would then come up with  
16 a new set point within the band that would -- and maybe it  
17 would increase the frequency that we were doing the per-  
18 formance test, whichever it was, to assure us that from  
19 one test to the other that they stayed within the limits  
20 of the tech specs.

21 Q You say that there were 120 LERs caused by  
22 these types of problems or by instrumentation problems.

23 Do you have any -- when did you make these  
24 modifications deleting what you characterized as overly-  
25 conservative set points?

mpb2

1           A       Standard tech specs increased a lot of these  
2 requirements of things. Most of these took place through  
3 the year 1977.

4                    You're talking of hundreds of PTs that we're  
5 talking about, and you don't do it overnight. It takes a  
6 period of time. And also you had to run trends back  
7 over the results to find these. Sometimes you thought you  
8 had them right; it would not be. It would be a repeat.  
9 The next time you would probably get in to where it would  
10 happen again.

11           Q       Well, my concern is, in looking at the number  
12 of LERs, is how can I tell whether the reduction is caused  
13 by changing your set points or by a lesser number of similar  
14 type instances?

15                    In other words, I see here that the number of  
16 LERs falls down, and that you change your set points. Can  
17 I tell whether the reduction in LERs was just caused by a  
18 change in set points, or by root operation?

19           MR. JONES: Mr. Chairman, I'm not exactly sure  
20 how to object to the question, but I'm not clear about the  
21 premise, or whether any premise has been established that  
22 there was poor operation involved or something of this sort.

23           CHAIRMAN SMITH: I certainly thought there was  
24 a premise.

25           MR. JONES: It would help me if Mr. Reis would

mpb3 1 state it.

2 MR. REIS: Well, we have a list in lines 9 through  
3 13 of a number of LERs in each year, and below that we have  
4 an explanation that they were overly conservative set points  
5 so that some changes were made in set points. And I'm try-  
6 ing to find out which of the -- maybe the question should  
7 be which of the LERs in the earlier years were caused by  
8 these overly conservative set points, so that we have  
9 something to compare.

10 If you look in your regulatory standard, then  
11 we can't -- or the regulatory standard has been lessened,  
12 we can't tell whether the plant is on an upward trend or  
13 a descending trend.

14 MR. JONES: That solves the problem, I think.

15 My problem was that the implication to the origi-  
16 nal question seemed to be that the set points that had been  
17 established too conservatively indicated poor operation.

18 MR. REIS: No, I'm sorry if I gave that impre-  
19 ssion in my question.

20 WITNESS BANKS: I was talking to Mr. Utley when  
21 you were going over this. Do I owe you an answer?

22 BY MR. REIS:

23 Q Yes, you do.

24 A (Witness Banks) I think our testimony states  
25 that during the period of 1975 through '77 there was 120

mpb4

1 LERS on instruments. In 1978 there was five. That gives  
2 you the reduction that took place. That is an action taken  
3 that I would consider appropriate management to operate  
4 within the limits of the regulatory with the equipment that  
5 you have installed, that we were trying to maintain operations  
6 within the regulatory requirements.

7 Q Just taking Brunswick Unit 2, we have a larger  
8 span of time. Would that indicate to you that the LERS  
9 were not falling, if you subtract those that have the  
10 overly conservative set points?

11 A Let me understand. We did not relax the set  
12 points requirements. The set point requirements of the  
13 instruments are there by tech specs.

14 We added operational restrictions on ourself  
15 by setting any different point. We decreased maybe the  
16 top power level we can get because we reduced it so it  
17 wouldn't drift out on a trip condition, or this type of  
18 thing. So we became more conservative in our operation.  
19 That is what you do any time you've got LERS is try to  
20 become more conservative so that you don't get LERS.

21 CHAIRMAN SMITH: Mr. Reis's question does not  
22 exclude that.

23 MR. REIS: That doesn't exclude that answer.  
24 That's fine.

25 WITNESS BANKS: Well, that's what I was trying to

mp55

1 explain, what all of this amounts to on the numbers and this  
2 type of thing. I can't tell you from my information I have  
3 which LERs on which years were instrument drifts.

4 WITNESS UTLEY: I can assure you that this is an  
5 example of how -- one way of how we are reducing LERs. We  
6 are also following programs on other reoccurring LERs to  
7 eliminate the cause of LERs. The numbers are still more  
8 than we would like for them to be, and we're still working  
9 to get these numbers down to some much lower level.

10 MR. REIS: Okay.

11 BY MR. REIS:

12 Q What you're telling me here is that when you  
13 say "overly" -- let's say the instrument -- let me give you  
14 an example:

15 Let's say an LER would be any time the instru-  
16 ment passed ten. What you're saying is you're putting in  
17 company administrative controls to keep that all the time  
18 below nine. Is that what you're telling me? Is that what  
19 you're saying?

20 A (Witness Banks) Using your assumption that when  
21 it passes ten it becomes a reportable incident, we find that  
22 if we set it at nine and we come back and recheck it in  
23 30 days, it's at ten and a half. Now, we may continue with  
24 it at nine, but we would come back and recheck it and reset  
25 it every 15 days, and it may only get to nine and a half.

MPB/abl  
ls mpb5

1                   Or if it is better to continue it on a 30-day  
2 basis, we may set it at eight and a half. And within 30  
3 days it will not reach ten, and then reset it as we do every  
4 calibration.

5           A       (Witness Utley) The initial settings were putting  
6 a burden on us over beyond what was required. It was an  
7 effort on our part to do our best job possible in regard to  
8 these settings. The instrumentation is not designed and  
9 built such that you can do that, so consequently, the only  
10 solution is to set your settings conservatively such that  
11 you don't exceed the regulations.

12           Q       Okay.

13                   And if we disregard all these instrumentation  
14 problems caused by overly conservative setpoints, have the  
15 LERs gone up or down or remained about the same at Brunswick  
16 2 since 1975?

17           A       (Witness Banks) I think if you took the total  
18 number for that period of time and subtracted out, you would  
19 still see that they were on a -- let's say a level trend  
20 when you consider the additional requirements of standard  
21 tech specs and this type of thing. There's additional regu-  
22 latory requirements that are in there, but the trend, I think  
23 you will find, is pretty much a straight line, which tells  
24 me it is improving.

25           Q       In line 21 you talk about modifications and I take

MPB/eb2

1 it that's for the containment atmosphere control system.

2 What modifications are you talking about there?

1.379

3 A This was a modification-- Because we had a moisture  
4 problem we were sampling the air out of the containment,  
5 sampling that atmosphere; the high humidity of that air when  
6 it got into a cool area would condense. Moisture would con-  
7 dense out and it was affecting our instruments.

8 We tried several different modifications. On some  
9 of the instruments, we now have a refrigeration type system  
10 to eliminate the moisture before it gets to the instruments.

11 Q Going to page 62 in the discussion of Robinson  
12 LERs at the top of the page, what has been the principal  
13 cause of the increase in LERs at Robinson between 1975, 1976  
14 and 1977 and 1978?

15 A Looking at what we have here, we have listed "com-  
16 ponent failures" and "others" as being the two significant  
17 increases in that period of time.

18 Q Can you give us any more detail than those very  
19 broad -- I'll categorize them as very broad categories.

20 A Component failure? I don't have any information  
21 with me.

22 Q Do you have any reason for the increase?

23 A Part of that is attributable to additional regu-  
24 latory requirements, which is offset reporting requirements  
25 on the core. We've been adding about five a year there



MPB/eb3

1 which were never reported before. That's on your offset  
2 for your thermal loading and neutron loading in the reactor.

3 Q Mr. Utley, you said you followed trends in LERs.  
4 What actions have you taken? Did you spot this trend or  
5 did you take any action in regard to it in regard to  
6 Robinson?

7 A (Witness Utley) Well, going back prior to  
8 Robinson, even to 1975, we set up a special Task Force that  
9 made a trip up the East Coast and made a study of the dif-  
10 ferent plants in an effort to try to determine what their  
11 expense has been and where we differed and just exactly what  
12 changes we could make that would be improvements in regard  
13 to our systems.

14 And as a result of this we did take advantage of  
15 some of the things that we found in regard to reporting,  
16 keeping up, trending, means of investigating. We've re-  
17 organized our over-all staff to provide more readily  
18 engineering in regard to problems that get involved in the  
19 design of the operating plant.

20 We set up a section of engineers that is dedicated  
21 to engineering problems in operating plants.

22  
23  
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1 I frequently have discussions with Mr. Furr in  
2 regard to what these trends show, my positions on them, and  
3 the fact that we need to put forth efforts in regard to  
4 correcting these problems.

5 Q Was this trend reported to you?

6 A Was this trend....

7 Q Was a trend on the basis of these figures  
8 reported to you?

9 A I do have records that show the trends, yes.

10 Q Did you write any memorandum dealing with the --

11 A I have not written memorandums in regard to  
12 this situation. That would not necessarily be the way I  
13 would pursue a problem of this type.

14 Q Have you called for any reports from the  
15 Robinson management on the situation, on this type situation?

16 A Of course, these ERs are kept, a record is kept  
17 of them in the office, and these records are routed through  
18 me. And I have the opportunity to observe them.

19 Q Did you read the LERs on this plant that shows  
20 these things? When you saw these figures here did you call  
21 for the LERs to examine them?

22 A I primarily followed the trends, and my actions  
23 are primarily to get the trends in the right direction. I  
24 do not get involved in the details of the actual LERs. That's  
25 the responsibility of people that report to me.

WEL/mpb2

1 Q When you saw this trend, what specific action did  
2 you report, or did you order taken at the Robinson Plant  
3 in regard to this?

4 A Well, for example, I met with Mr. Furr, not later  
5 than this week in regard to LER trends and my position  
6 as to that.

7 Q Did your position on LER trends lead to a reduc-  
8 tion in the LERs between '77 and '78?

9 A Well, I would say our total management effort  
10 in regard to LERs has resulted in what the record shows.  
11 And the opportunity for LERs continues to increase. At  
12 the same time we continue to increase our better surveillance  
13 and better application of engineering to get to the root  
14 cause of the problems to correct it, such that they won't  
15 be reoccurring.

16 And I testified before, I'm not satisfied with  
17 this trend.

18 Q At various places in the testimony it is talked  
19 about interpreting regulatory requirements strictly and  
20 interpreting regulatory requirements conservatively.

21 Do they mean the same thing to you?

22 A Well, in most cases there's judgment applied  
23 with regard to the interpretation of procedures, regulations,  
24 whatever. And I don't think we try to cut a fine line on  
25 whether it qualifies or doesn't qualify in regard to measuring

WEL/mpb3

1       against regulations.

2                   Of course, it's my view that regulations have  
3 built into them a considerable amount of conservatism. And  
4 as long as you're complying with regulations you are  
5 certainly operating well on the safe side in respect to the  
6 nuclear plant.

7           Q       You never try to second-guess NRC and feel that  
8 there are more safe ways of doing things, that you should  
9 do things in addition?

10          A       I don't think that's the right approach, to try  
11 to second-guess NRC. We use our best wisdom and management  
12 judgment and capability to try to set up procedures and  
13 practices that are sound. And I'm sure NRC inspectors use  
14 their wisdom as to where they can look and find whatever it  
15 is we're not meeting what we say we'll do, and they do a  
16 good job in this respect.

17          Q       Is there any difference in your mind in inter-  
18 preting regulations strictly and strictly abiding by regula-  
19 tions?

20                   Does the word "strictly" in those two sentences  
21 have different meaning to you?

22          A       Not from my viewpoint, no.

23          Q       Now, when you interpret a regulation strictly,  
24 you interpret it as narrowly as possible, don't you?

25          A       I think I've answered that question. I wouldn't

WEL/mpb4

1 say we interpret it as narrowly as possible. We interpret  
2 it as to what it means and it's our sincere effort to try  
3 to comply with the regulations.

4 MR. JONES: Mr. Chairman, may I ask if Mr. Reis  
5 is speaking of the use of these words at particular places  
6 in the testimony? I'm not sure whether --

7 MR. REIS: I'm not sure whether I could --

8 MR. JONES: -- he and Mr. Utley are necessarily  
9 even talking about the same thing.

10 MR. REIS: I can't find the reference to the  
11 word "strictly". I know it does appear in the record. And  
12 my concern, really, without making a long speech about it,  
13 was whether they were strictly or narrowly interpreting  
14 regulations or strictly following regulations. And I think  
15 they have different implications, if not different meanings.

16 WITNESS UTLEY: Well, I think one way we have  
17 been evaluating as to what kind of job we're doing in  
18 regard to regulations is really we look at the industry and  
19 what their performance is against what our performance is.  
20 And again, my evaluation of what I found in this regard is  
21 that we fall somewhere in the middle.

22 It's no intent of ours to try to draw a line and  
23 say this is the regulation, you're complying on this side  
24 of the line and you're not complying on that side of the  
25 line. We look at it more from the management judgment

WEL/mpb5

1 standpoint as to what is best for the operation as it relates  
2 to the regulations. And sometimes our interpretation is  
3 probably more stringent than the regulation calls for. And  
4 I'm sure there are cases where we don't interpret enough  
5 and find ourselves in violation.

6 BY MR. REIS:

7 Q When you say more stringent, you mean that there  
8 is times when CP&L is more conservative?

9 A (Witness Utley) There's times when I think it  
10 falls in both categories.

11 Q I'm trying to get a bit of the philosophy of  
12 CP&L in some of these questions.

13 A Well, I'll give you my philosophy.

14 I have no axe to grind as far as regulations  
15 are concerned. It's my responsibility as a manager in  
16 Carolina Power and Light Company to comply with regulations  
17 down the line. There is no exception allowed. And any time  
18 that I do not comply with regulations, my performance has  
19 not been what is expected of me, I can assure you of that.

20 Q Going to page 64 --

21 CHAIRMAN SMITH: That's expected of you by?

22 WITNESS UTLEY: By Mr. Jones in my position  
23 description.

24 CHAIRMAN SMITH: Do those expectations rise to  
25 the level of a board of directors and Mr. Harris?

WEL/mpb6

1 WITNESS UTLEY: I'm sure they rise to Mr. Harris  
2 because Mr. Harris has had me in the board room with the  
3 plant manager to discuss problems in regard to meeting  
4 regulations.

5 BY MR. REIS:

6 Q Going to a different topic, let's go to page  
7 64. And there's talk there in regard to the reactor core  
8 isolation cooling system.

9 Do you know when General Electric was first  
10 contacted in regard to this problem?

11 A (Witness Banks) Are you asking about the problem  
12 that was a generic problem, or the problem that was at the  
13 Brunswick Plant?

14 Q The problem as it related to the Brunswick Plant.  
15 The problem you answer at line 17 on page 64.

16 A They had a project manager as a part of our  
17 startup group, so when it was discovered during the startup  
18 as a representative of GE they were made aware of it at that  
19 time.

20 Q Okay.

21 Is this a safety-related system, the RCIC system?

22 A If my memory serves me right, it's not an ECCS  
23 system.

24 Q Is it a safety-related system?

25 A Yes.

WEL/mpb7

1 Q In regard to the HPCI delta-T problem, would  
2 that system have been tested in July and August, as well  
3 as in September, and the corrections made then?

4 A Which problem? That would help me.

5 Q The problem involving the high temperature iso-  
6 lation signal.

7 Could the test have been performed in July?

8 A You're talking about the delta-T?

9 Q Yes.

10 CHAIRMAN SMITH: That's what he said.

11 BY MR. REIS:

12 Q I'll change that not to delta-T, but the high  
13 temperature isolation signal.

14 A (Witness Banks) This was the high temperature  
15 that we would have in the area during the hottest time of  
16 the year, and the NRR asked us to get that information and  
17 provide it for them. And that could happen any time when  
18 it was in the hottest time of the year in the Brunswick  
19 area. August and September are the ideal time to get the  
20 hottest time of the year.

21 Q And I take it July too.

22 A July can get pretty hot, but if you'll look  
23 through the records when we have the highest records, it's  
24 late August and possibly early September.

25 Q At the bottom of page 71, and continuing to page



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1 72, there's talk of 13 surveillances at Brunswick and 11  
2 at Robinson.

3 Can you tell me what these encompass, how long  
4 they are, how many people are involved, in this sort of  
5 surveillance? I imagine there are several different kinds  
6 and wish your answer would indicate that if that's so.

7 A We are referring here to the Operational Quality  
8 Assurance Section in the Generation Department. Their  
9 surveillance, as I discussed earlier, are based on their  
10 judgment, from what they have had from reviewing LERs, NRC  
11 reports, Corporate QA reports, Special Operations activities  
12 that have taken place at the plant, as well as a planned  
13 area.

14 Normally they will consist of about five days  
15 or two or three individuals at the plant.

16 Q What do you mean by a planned area?

17 A They know whether they have reviewed operation  
18 and they know whether they have reviewed health physics  
19 activities, procedures, this type of thing. And over a  
20 period of time they will end up covering all of those. Their  
21 program does not identify exactly when they will cover them,  
22 but they do keep records and know when they have covered  
23 those particular areas. And they do work on some type of  
24 cycle.

25 A (Witness Utley) I might add to that, they are

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1 also looking at what NRC is apt to look at as well in an  
2 effort to try to keep us as much out of trouble as possible.

3 I mean, just like on quality assurance audits,  
4 certainly we're going to be looking carefully with regard  
5 to the situation in our Robinson Plant, and it's my thoughts  
6 that an in-depth effort will be made. It's going to be  
7 tougher to find problems at Robinson than it was at Brunswick.

8 Q Do you also attempt not to duplicate the work of  
9 the NRC inspectors and look at other areas that you feel  
10 might affect quality?

11 A Absolutely.

12 A (Witness Banks) Yes.

13 Q Going to page 75, what is the training -- strike  
14 that.

15 What is the qualification of the training  
16 positions, of the people that occupy the training positions  
17 at line 11? How do you find people and what do you look  
18 for in training positions?

19 A We look for people that know how to train. Most  
20 of the positions that we have here are at the plant. The  
21 training coordinator is exactly what it says. He coordinates.  
22 He sets up the schedules of the people getting the training.  
23 He takes the information from the supervisors and identifies  
24 what type of training his people need, and then he locates  
25 the type of training to assure that the people get it, whether

1 it's individual people that may give it to them if he has  
2 them, or we bring in somebody else who trains them, or we  
3 send them off to school.

4 Q In other words, you don't have people that can  
5 train everyone for every task in the plant?

6 A That is correct.

7 Q Okay.

8 Going to page 90 -- and I just want to confirm this,  
9 out of the planned 755 people that you intend to have at the  
10 Harris plant, 16 will be in quality assurance, is that it?

11 A If I recall the organization chart, right.  
12 Including the director there are 17.

13 Q All right. What skills will they have? What skills  
14 are you going to look for for those people?

15 A There will be a variety of skills which will be  
16 identified in the position descriptions, the same as we have  
17 at our operating plants now. The skills there will be no  
18 different than the skills or the requirements for the people  
19 that are at Brunswick, or the skills of the people that are  
20 at Robinson today.

21 Q What are those skills?

22 A They have to be knowledgeable in quality assurance.  
23 The specialists have to have an education or experienced  
24 background to meet the educational requirements.

25 I'd have to bring in a position description to

1 give you all the details.

2 A (Witness McDuffie) Mr. Reis, construction QA at  
3 Harris has been performed by CP&L employees, and we have  
4 people with backgrounds in civil, electrical, mechanical,  
5 metallurgy, and welding, and we would hope that some of these  
6 construction people at some point will be transferred over  
7 to form the nucleus for this operating plant QA program.

8 Q Thank you.

9 On page 91 you indicate that you expect to have  
10 a staff of 33 engineers and technicians on the startup work  
11 at Harris. How does that contrast with what you've had at  
12 Brunswick, both as to 2 and as to 1?

13 A (Witness Utley) Mr. Reis, I'm speaking from memory,  
14 and this is subject to check, but it's my thoughts from a  
15 management control standpoint that we'll be about three times  
16 heavier on Harris as we were on Brunswick, and we'll be, from  
17 the numbers of people functioning in the startup organization,  
18 we would be probably twice as much.

19 Now, this organization will also be supplemented  
20 by personnel from Westinghouse who have considerable experience  
21 in startup. In fact, we already are discussing with  
22 Westinghouse the people that are available, and reviewing  
23 resumes to assure that we do get people that have had  
24 considerable experience.

25 And when I say considerable, I'm talking about 10

wel 3

1 years of experience in startup activities.

2 We don't know at this time whether our estimate  
3 is on the high side or low side, but it's the best we can do  
4 at this time. As we get closer to the startup, which is  
5 several years down the road, if this needs adjusting it will  
6 be adjusted.

7 But I assure you we'll have ample manpower there  
8 to do proper startup of the Harris units, and this organiza-  
9 tion will be maintained from Unit 1 on through Unit 4.

10 Q These 33 people that are referred to are going to  
11 be direct CP&L employees that are listed on page 91?

12 A These are CP&L employees, on CP&L's payroll, and,  
13 as I remember, we have selected one man in this organization  
14 at the present time, and he has something like 16 years  
15 experience, and 14 of that in nuclear.

16 Q And you don't intend any of the units of Shearon  
17 Harris to be in startup simultaneously, do you?

18 A Absolutely not. That is not our intent.

19 Q On that, going to figure -- the figure on page 95,  
20 it might be well if you can do it easily -- I don't want to  
21 spend a lot of time on this -- give me the projected  
22 operating dates, just so that we have it on this figure, of  
23 each of the Shearon Harris units at this time.

24 A (Witness Banks) The operating license date is  
25 June 1983 for the first unit. June 1985 for the second unit.

wel 4

1 June 1987 for Unit 4. June 1989 for Unit 3.

2 Q And how far before that time will you start the  
3 startup testing?

4 A (Witness McDuffie) Our master construction schedule,  
5 which was prepared jointly by Generation and Construction,  
6 indicates that we'll start pre-op testing 18 months prior to  
7 fuel loading.

8 Q And how long does startup go after the issuance --  
9 I take it the date you gave me, unless I heard wrong -- I  
10 didn't understand -- were the dates you projected the dates  
11 you'd receive your OL's for each of these units?

12 A (Witness McDuffie) Fuel loading date.

13 A (Witness Banks) Right.

14 Q And the startup extends past the receipt of the OL,  
15 doesn't it, to get to full power, essentially?

16 A I think we need a little definition here. There  
17 was a preoperational program that takes place prior to the  
18 OL, as the NRC interprets it. Then there's a startup program  
19 that takes place after you get the OL. And the startup  
20 program and the commercial operation will take about nine  
21 months.

22 A (Witness McDuffie) We think that nine months  
23 indicates some conservatism on our part. Most utilities  
24 schedule from fuel loading to commercial operation about six  
25 months.

wel 5

1 Q But if you look at nine months, there would be a  
2 short overlap of startup between the various plants.

3 A No, these units are two years apart.

4 Q Well, 18 and 9 gives me 27 months.

5 A You mean from the startup pre-op to commercial  
6 operation?

7 Q Right.

8 A There would be three months overlap.

9 A (Witness Banks) I'd like to clarify something else  
10 here.

11 When you get the OL, you have to remember, now,  
12 that the plant can only be operated by the licensed operators.  
13 You have another group of people that is involved, other than  
14 just the startup group, and all that startup group is not  
15 needed for that unit now. They can move on to the next unit.

16 Q Going to the chart on page 74 -- I'm sorry -- on  
17 page 98 -- I was going to ask a question about the year '74 --  
18 I notice that there is, in the line labeled "Professionals,"  
19 there's a slackening off beginning in the year 1974.

20 Can you tell me the reason why there was a slowdown  
21 in the hiring of professionals then?

22 A (Witness McDuffie) If you take the chart, the sharp  
23 climb starts about '72 through '74. Prior to '72, we were  
24 hiring AE's and contractors to design, manage and construct  
25 our projects. And then in the early seventies, the decision

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1 was made that CP&L would manage the Harris project, and that  
2 we would participate to a greater extent in some of the  
3 design problems in our existing plants.

4 So we had a steady buildup for two or three years  
5 there to reach the point where we could manage projects, and  
6 now we have the nucleus of this organization and it will just  
7 reflect growth.

8 Q In other words, that growth from '72 to '74 is a  
9 growth in the construction side of CP&L, as contrasted with  
10 the operations side?

11 A As well as engineering and in some of the  
12 technical services area we built up to participate more  
13 fully and rely less on the AEs. We're doing more work in  
14 siting, we're doing almost all of our environmental work now.

15 That sharp climb just reflects the CP&L decision  
16 to do more in house, and we've relied less on outsiders.

17 Q There's been testimony before that in the startup  
18 of Brunswick, and essentially the period -- and the beginning  
19 of the operation of the Brunswick units, from approximately  
20 mid-'74 to mid-'77, the Company was experiencing troubles  
21 and problems that it wished it didn't have. And this  
22 reduction in the growth of professionals seemed to coincide  
23 with that period.

24 Is there any correlation?

25 A (Witness Utley) No. I would say there's no



wel 7

1 correlation between that situation.

2 Q Why not?

3 A Primarily because of the situation at Brunswick.

4 We had all the manpower that could be utilized at that  
5 facility to help bring the startup about, whether it be  
6 CP&L manpower, or whether it be contract manpower.

7 Our problem, primarily, at Brunswick was the  
8 amount of work that had to be done within a certain period  
9 of time, and there just wasn't a way to apply the manpower  
10 to the beneficial effort in regard to bringing about the  
11 work, when you looked at the expertise and so forth that was  
12 required.

13 Q Going to page 105, I noticed that all the  
14 supervisory employees for Robinson that are listed have a  
15 Bachelor of Science in Engineering or Physics, except the  
16 Quality Assurance Supervisor and the Environmental and  
17 Radiation Control Supervisor.

18 Do you feel they less need that education than  
19 the others?

20 A (Witness Utley) I'll be glad to speak to that.

21 The answer to your question is no, not from that  
22 standpoint.

23 But I think if you'll look at the qualifications  
24 of the individuals that fill these positions, they have a  
25 wealth of experience and background in their field, and they're

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1 very well qualified for their job.

2 For example, if you go to Robinson, this man worked  
3 in this field back in the mid-fifties and has been on nuclear  
4 plants, it's my recollection, since that time. He's a very  
5 energetic young man, and has provided himself experience with  
6 regard to learning the techniques and knowledge of his  
7 specific job, and, from my viewpoint, is well qualified.

8 If you look at the quality assurance man at  
9 Robinson the same thing pretty much applies. He's retired  
10 out of the military with a wealth of background in regard  
11 to quality assurance work. In fact, I think Mr. Banks hired  
12 Mr. Garrison.

13 Q Going to your startup superintendent for Harris,  
14 could you give me his educational background, as set out on  
15 page 109?

16 A Dick Morgan's primary education is high school,  
17 with 16 years experience at operating power plants. In  
18 addition, he has gone through the necessary basic nuclear  
19 engineering that qualified him to take the Senior Reactor  
20 Operators license and qualify.

21 And for all practical purposes, he's got a basic  
22 nuclear engineering as it applies to operating power plants  
23 sufficient to qualify him to deal with any problems related  
24 to startup and operation of a power plant.

25 Q And you don't feel that university education is

wel 9

1 necessary for that?

2 A I do not feel it's necessary in a situation where  
3 a man has got this type of experience, that's right, and  
4 this type of training. And as I recall the ANSI Standards,  
5 they recognize this pretty much along the same lines.

6 Q Mr. McDuffie, I want to now turn a bit to  
7 construction.

8 DR. LEEDS: I was wondering if we were ever going  
9 to get to construction.

10 (Laughter.)

11 MR. REIS: Let me say, I don't have nearly the  
12 number of questions on construction.

13 BY MR. REIS:

14 Q Can you briefly outline Ebasco's quality assurance  
15 program, lines of command, number of people, and how they  
16 conduct their program?

17 A (Witness McDuffie) Ebasco does not have anything  
18 to do with construction at the Harris plant. Ebasco's  
19 quality assurance program, as I understand it, is an  
20 independent department. It does not report up through the  
21 lines of engineering or construction, and it does check  
22 everything that Ebasco does.

23 It also checks in the area of procurement for us.  
24 They make vendor surveillance audits to people we buy materials  
25 from.

wel 10

1 Q So essentially you don't know what Ebasco does  
2 within its own shop to assure the quality of its product,  
3 aside from what --

4 A Our QA people meet with Ebasco periodically to  
5 review the status of the project.

6 Q Now, can you answer those questions as to Daniel,  
7 what their quality assurance program is?

8 A Daniel has a quality assurance program which Daniel  
9 uses on their jobs. Daniel does not have quality assurance  
10 responsibility on our project.

11 Q I see.

12 Now, is it the site manager or the resident  
13 engineer who is -- who was formerly employed by Daniel?

14 A The site manager.

15 Q The site manager. And how long has he been  
16 employed by CP&L?

17 A I'm not sure I have that information. I can tell  
18 you more about him.

19 MR. JONES: Excuse me. Are you talking about  
20 Mr. Parsons?

21 MR. REIS: Yes, the site manager.

22 MR. JONES: His curriculum vitae is in the record  
23 from the September hearing. You could find it there I think.  
24 He doesn't have it readily available.

25 BY MR. REIS:

Q In your recollection, about when?

wel 11

1           A       (Witness McDuffie) He was the first engineer in  
2 Ebasco assigned to the Harris project. No, I'm sorry. The  
3 Robinson project, back in '66. And he was resident engineer  
4 on the Robinson Number 2 for Ebasco. He pretty much --

5           Q       For Ebasco or for Daniel?

6           A       For Ebasco. And he pretty much set up the QA  
7 organization and procedures at that project. Of course it  
8 was far different from today, but he was the one that took  
9 our early inspection procedures and put them into writing.

10                   He finished the Robinson project, and then  
11 Ebasco sent him down to St. Lucie on the Hutchinson Island  
12 project.

13                   After awhile, he left Ebasco. He was not too  
14 happy in Florida. And he went with Daniel for just a short  
15 time in an engineering capacity. He was only there for four  
16 months, as I recollect, and then he went back with Ebasco  
17 and they sent him to the west coast on one of the WPPS units.  
18 And it did not look for awhile as if they were really going  
19 to get off the ground.

20                   He decided to join CP&L. So we've known him for --  
21 since about '66.

22                   He was not with CP&L when Daniel was selected as  
23 the contractor by CP&L.

24           Q       I see. He was with Ebasco at that time?

25           A       I'm not sure whether he was with Daniel or Ebasco,

wel 12

1 but he was not with CP&L.

2 Q And part of his job is to inspect the quality of  
3 what Ebasco and Daniel do?

4 A The people under his supervision are responsible  
5 for field engineering, which is really in place inspection  
6 and work at the Harris project. The QA organization --  
7 CP&L's QA organization at Harris does not report to him.  
8 That organization reports to Tal Chiangi, who reports to the  
9 Technical Services Department.

10 Q Doesn't inspection engineering look at the work  
11 that is being done on the site and make reports on the quality  
12 of the work that's being done on the site?

13 A Yes.

14 Q And that inspection and engineering is several  
15 levels down. It's under the site manager?

16 A Yes.

17 Q Now, going back to the resident engineer, does he  
18 have any background with Daniel or Ebasco?

19 A No. You're talking about Ashley Lucas. His  
20 background -- he was in nuclear engineering at the management  
21 level in Newport News before he joined us.

22 Q Now, the figure on page 17 of your testimony has  
23 a legend that indicates that some boxes have direct  
24 responsibility for assuring construction is in compliance with  
25 plans and specifications.

wel 13 1 A Headed by Ashley Lucas, who we just talked about.

2 Q Right.

3 And the people working in those sections, do they  
4 always receive their pay checks from CP&L?

5 A Let me talk a little bit about that.

6 The Harris project, over \$4 billion, is a major  
7 undertaking. We know that many of our plans are going to  
8 change, and wherever possible we have developed contingency  
9 plans.

10 One of our contingency plans is that in our Daniel  
11 and Ebasco contracts we have made provisions that either of  
12 these companies will furnish us people in the event we have  
13 problems with staffing.

14 Now, to your direct question, none of the senior  
15 or supervisory people in this organization are Daniel  
16 employees. At some of the lower clerical level, or material  
17 handling level, we do have some Daniel employees who receive  
18 day-to-day instructions from CP&L employees.

19 Q Now, most of the engineering inspection that's  
20 going on right now at that plant is civil engineering, isn't  
21 it?

22 A That's true, although within the last month we  
23 have started some lighting work and pipe hanging, and we're  
24 moving to other phases of the project.

25 Q And most of your -- most of the people in the

wel 14

1 box "Civil" under Inspection Engineering are Daniel employees,  
2 aren't they?

3 A No. The concrete inspection is by CP&L. Daniel  
4 does the layout, the survey type things. They decide where  
5 to put the boxes and the -- that's inspection to an extent,  
6 and that's done by Daniel's survey crew.

7 The batch plant, where all of the mixing and  
8 testing of the material is performed, is done by our QA  
9 organization, and does not come under even the resident  
10 engineer. That's CP&L people.

11 The inspection of placing of concrete is done by  
12 QA.

13 The making of the cylinders and testing the  
14 concrete is done by QA.

15 This field engineer, resident engineer group, does  
16 check to determine that the proper amount of resteel is in,  
17 it's at the right place, that the documentation is correct.

18 But most of our concrete inspection is performed  
19 by QA.

20 Daniel does not inspect any concrete.

21 Q But does the rebar -- who does the rebar  
22 inspection?

23 A That's done by CP&L.

24 Q Didn't you just tell me that those people were on  
25 Daniel's payroll?



wel 15

1           A       The people who locate it, the various construction  
2 joints, and the form layouts and the walls. The surveying  
3 is done by Daniel employees.

4           Q       What assurance have you built into your organization  
5 since you have these Daniel people who are paid by Daniel on  
6 the payroll, that you don't have the case of -- let me use  
7 the vernacular -- of the fox watching the hen house?

8           A       These people that we're using from Daniel are not  
9 in decision-making jobs. In our warehousing, the warehouse  
10 supervisor, the senior warehouse people, are on CP&L's payroll.  
11 They're CP&L personnel.

12                   Now, some of the folks who are moving material,  
13 stocking it, moving it out of the warehouse, are Daniel  
14 employees. The same way with some of the clerical jobs,  
15 typing, filing, some of those things are done by Daniel.

16                   But we don't have any Daniel people in decision-  
17 making jobs.

18           Q       Do you have trouble finding warehousemen to employ  
19 directly? I mean people who move pipe around, and people who  
20 type order forms? Do you have trouble finding those on the  
21 local labor market today?

22           A       Our staff is now adequately manned. As far as  
23 moving the pipe, that's done by crafts people.

24           Q       I see. But these warehousemen --

25           A       The warehousemen -- you know, if a box of valves

wel 16

1 comes in, the warehouse people check them out, unload them,  
2 open the box and check all the documentation. The QA people  
3 will work in conjunction with them, and then they'll tag  
4 these valves and store them in the proper place.

5 Q Do you have problems finding people to do the job  
6 you just talked about?

7 A We haven't had problems finding warehouse people.

8 Q Well, why are they on Daniel's payroll?

9 A We don't think that these people who are handling  
10 this material necessarily fit in our organization. We're out  
11 there to manage the job, and handle the management function.

12 But as to actually handling the material, there'll  
13 be times when we'll need many more than at other times.  
14 These people will have more of an opportunity to move into  
15 another field if they work for Daniel. They can take craft  
16 training and possibly become some skilled construction worker.

17 Q I know you indicated you don't know, and I take  
18 it you don't know, the particular quality assurance program  
19 of Ebasco.

20 Have your people performed any audit of their  
21 quality assurance program?

22 A Yes. We certainly have. We perform regular audits.

23 Q And of Daniel's quality assurance program?

24 A Daniel is not doing any quality assurance work  
25 for us. Even the end stamp for the project. CP&L is doing

wel 17

1 all the procedures, and Daniel will work to those procedures.

2 Q On page 11 there's talk about checking for quality  
3 assurance. I don't want to go into the exact particulars of  
4 your contract with Daniel, but if you shut them down for a  
5 time to check quality because you have a question, who bears  
6 the cost of that?

7 A CP&L.

8 Q And if the work is found bad, I take it Daniel does  
9 then, am I correct?

10 A Not unless we could show negligence.

11 Q I see.

12 A That's not true of the other contractors at the  
13 site. Daniel is building really the plant. The excavation of  
14 it, building of dams, is by other contractors. Structures  
15 away from the plant are by other contractors. They would  
16 have a financial risk if they did things wrong. The  
17 containment liners are by another contractor. The heating  
18 and ventilation will be another contractor. Miscellaneous  
19 buildings will be by other contractors.

20 All these other contractors will be direct  
21 contracts with CP&L, and they will be awarded on some firm  
22 price basis.

23 selon fls23

24

25

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c3 mpbl

1 Q So in other words -- but dealing with Daniel,  
2 when your quality inspector decides their work does not  
3 meet specifications, CP&L has to bear the cost of that,  
4 except when you can show that Daniel was negligent?

5 A That's true.

6 Q Do you have a percentage of work that your  
7 quality assurance people check? How are they assigned?  
8 How do they decide what to check in the field?

9 A All safety items are checked 100 percent, and  
10 we check nearly everything else.

11 One of our reasons for going to this management  
12 organization is it's just impossible to define the scope  
13 of a nuclear plant to the extent that anybody can bid on a  
14 firm price. So you've got to get into some kind of re-  
15 imburseable contract. And we're determined if we've got to  
16 do that, we want to make the decisions and watch the work.

17 And taking it a step further, we want to assure  
18 that we get all the quality that's been designed into the  
19 plant. So we set up our organization so that the inspection  
20 proceeds simultaneous with construction, and that errors  
21 don't go too far before they are caught.

22 So if we had a firm price contract, we would  
23 let them make a weld, and then check it. But since we  
24 stand to pay for it, we want it checked at the root pass,  
25 the set-up, and all the way.

mpb2

1 Q And all of these people shown on the chart on  
2 page 17, and the ones under the box, the workmen that sit  
3 under those boxes are responsible for quality and checking  
4 quality for CP&L, all the ones in the double-lined boxes?

5 A - No.

6 The resident engineer is responsible for assur-  
7 ring that the plant is built in accordance with the speci-  
8 fications and codes and our various commitments. He's  
9 also responsible for getting the material to the site,  
10 interpreting the drawings and the specs for the workmen.

11 Q So he has dual responsibility in that respect.

12 A Right.

13 On the far right, QA has no responsibility  
14 except assuring that everything is built in accordance  
15 with the codes and regulations.

16 Q Okay.

17 In your testimony -- recall to me if it is  
18 there, and I don't recall at the moment -- how many people  
19 are involved? You say 100 percent inspection of safety-  
20 related items anyway. How many people are involved in the  
21 quality assurance tasks?

22 A I believe that number is 40.

23 Q That's including those under the resident  
24 engineer, or just those under the quality assurance special-  
25 ists?

mpb3 1

A Just under quality assurance.

2

Q Okay.

3

A Let me check that number.

4

We now have 40 people, 40 quality assurance personnel at the site.

5

Q Okay.

6

Those aren't the ones that you said do 100 percent of the checking, do they? Those are also people like the resident engineer who are doing that checking?

7

A Who are doing first level QC work. These 40

8

are doing all the QA work.

9

Q And how many people do you have on the site now?

10

You changed that yesterday, and I forget. It's almost 2000?

11

A Well, Daniel has a little over 2800.

12

Q All right.

13

And those 40 can sufficiently check the 2800?

14

A Yes.

15

Q Going to page 27, on the first line -- and I

16

guess you'll have to start on the page before for the language -- and it's a simple question. What is the meaning of the word "significant" noncompliance?

17

The question might be simple to ask --

18

A I really don't need that word. These people

19

have absolute stop-work orders, and if it's not being done in accordance with the specs, they stop it.

20

mpb4 1

Q Okay.

2

And what is the meaning on line 9, I guess it is, of the word "important" before "functions"?

3

4

A Well, these people do review all information and testing records, and "important" would mean, you know, that it was a part of a code or a regulation. There might be some function that was, you know, beyond the requirement. But this is to assure that we do meet all of the requirements.

5

6

7

8

9

Q And this is your site construction quality analysis?

10

11

A Yes.

12

13

Q The corporate nuclear safety and quality assurance audit section, talked about on page 28, that was the five people discussed earlier today?

14

15

16

17

A No. This corporate nuclear safety and quality assurance is a higher level of audit than anything you and I have discussed. And this section reports to a department that reports to Mr. Jones.

18

19

Q I see.

20

Didn't we discuss that?

21

A And they're independent from any of the operating groups.

22

23

Q I see.

24

And how many people are in that?

25

A Well, that's headed by Mr. McManus, and he will

mpb5 1 be in the next panel.

2 Q I see.

3 Going to the top of page 47, and looking at  
4 lines 2 and 3, when do you expect more corrective action to  
5 be found --

6 A Absolutely; we would hope they would find all  
7 of them.

8 Q And it would be a poor reflection on you if NRC  
9 was finding more than you were finding, wouldn't it?

10 A I would think so.

11 Q You're supposed to be in there with greater  
12 depth, aren't you?

13 A Yes.

14 Q Okay.

15 A I'm not sure it's a requirement, but we are  
16 in there, at least now, in greater depth.

17 These people, this corporate audit you're  
18 talking about, these people when they audit operations,  
19 engineering, and construction, their reports are addressed  
20 to our chairman and the chief operating officer. The rest  
21 of us get copies.

22 A (Witness Utley) And I can assure you, he reads  
23 every one of them and he replies to them.

24 Q Now, on the bottom of the page you talk about  
25 400 nonconformances. Only about 25 percent involved plant



mpb6 1 construction processes and materials actually used.

2 My question is:

3 Can you detail and give us a better breakdown  
4 of what those remaining 100 nonconformances involved?

5 A (Witness McDuffie) I think it's fair to say  
6 that most of them are associated with material receipt.  
7 And it's some problem with the documentation for the material  
8 and it has to be cleared up before it can be used at the  
9 site.

10 Q Isn't that a procedural violation of an  
11 administrative nature?

12 A Well, we now write our contracts that include  
13 the requirements for documentation, and we put it in the  
14 contracts so that we can use money as a way to make these  
15 manufacturers send us the required documentation. But we  
16 usually have an area full of material with holds on it until  
17 the documentation has been cleared up and accepted.

18 Q Okay.

123

19 How about the nonconformances involving plant  
20 construction, actual plant construction? You said that 25  
21 percent involved plant construction processes and materials  
22 actually used. I think that's materials incorporated and  
23 actual plant construction.

24 What do these 100 nonconformances involve?

25 A Well, we may make a weld, and later QA checking

mpb7 1 the documentation, we may find that the wrong code was used  
2 or that the wrong weld metal or the wrong spec, and we  
3 would actually have to go back and cut that weld out.

4 Q Now to put this in perspective, how many items  
5 were done, or transactions completed, that there were 400  
6 nonconformances? In other words, the question really is  
7 what's the maximum number of nonconformances that there could  
8 have been, so that we know whether 400 is a large number or  
9 a small number, or....

10 A Well, I can give you one number that I reviewed  
11 with some of our people yesterday.

12 You can handle a piece of paper and there's an  
13 opportunity for a problem, maybe you don't sign it, or you  
14 initial it, or you don't date it, or you reference the wrong  
15 document. And our people at the site in document control  
16 are now handling over 80,000 documents. So the possibility  
17 of finding things wrong is rather large.

18 MR. REIS: I'd like to confer with my people,  
19 and I think it will take one minute. Otherwise I'm through.

20 (Pause.)

21 DR. LEEDS: Mr. Reis, while you're doing that,  
22 if I remember correctly, there was a place where there  
23 were some qualms of Mr. Murphy, or something like that. I  
24 think the record ought to show that you have explored those  
25 qualms of Mr. Murphy before you finish, if these are the

mpb8 1 right people to explore those qualms with.

2 MR. REIS: I will ask the record to show that  
3 Mr. Murphy is now shaking his head that, yes, I explored  
4 that area.

5 MR. MURPHY: I'm satisfied.

6 MR. REIS: That's all I have.

7 CHAIRMAN SMITH: We have just concluded two  
8 hours and ten minutes' worth of cross-examination, by  
9 yesterday's estimates.

10 (Laughter.)

11 EXAMINATION BY THE BOARD

12 BY DR. LEEDS:

13 Q Mr. Jones, I'd like for you to refer to  
14 Applicant's Exhibit GG. It's in the section preceding  
15 the tab. And there is a titled chart called Operations  
16 Objective.

17 Now I think you're at the top of that chart.

18 A (Witness Jones) Yes, sir.

19 Q Let's see, let's make sure we're on the right  
20 one.

21 Mr. McDuffie, Mr. Utley, and Mr. Rideout are  
22 on the bottom of that chart.

23 A Yes, sir.

24 CHAIRMAN SMITH: Does everybody have that chart?  
25 I can tell you the answer is no, because I don't.

mpb9 1

BY DR. LEEDS:

2 Q In Appendix C to the testimony of Panel III, which  
3 we explored, there were three sheets of paper, and one of  
4 the sheets of paper was out of the tech specs for Brunswick.  
5 And I asked the witnesses for the Staff if that was their  
6 interpretation of the way the organization was shown.

7 Now this, I gather, is the chart prepared by  
8 Carolina Power and Light and is their operational organiza-  
9 tion chart, is that right?

10 A (Witness Jones) This is correct.

11 Q Now the chart that was prepared by the Staff,  
12 they had some dotted lines where QA reported to you, and I  
13 don't find those lines on this chart.

14 A Well, they come under the manager here of the  
15 vice president of system planning coordination department.  
16 They're in his department.

17 For the purpose of this chart, they are auto-  
18 matically in here. This was just for the overall thing.

19 Q They don't report directly to you?

20 A For functional as far as QA, corporate QA and  
21 corporate health physics, they do, for all functional  
22 purposes. But Mr. Morgan is really their day to day super-  
23 visor, where they take care of the personnel problems and  
24 these kinds of things.

25 Q Okay.

mpbl0 1

So Mr. McManus does in a sense report to you,

2

is that correct?

3

A Yes, sir. For functional work, yes, sir.

4

Q Well, what does Mr. Morgan control of Mr. McManus

5

there?

6

A Pardon?

end  
5Madelon  
2D flws  
WRBloom

7

Q What control does Mr. Morgan exercise over

8

Mr. McManus?

9

A Mr. Morgan takes care of personnel problems.

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WRBloom 1  
fls Madelon  
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Q What I'm trying to explore is just where does Mr. McManus, in your view, function under Mr. Morgan, and where does he come in and report to you?

The Staff document indicated that he reported to you, at least through a dashed line, which I guess is not as strong as a straight line.

A That's right.

Where there's a straight line it's without any qualifications at all, everything in that way.

But just anything about his routine, day-to-day... Say if he was going to schedule vacations or any of his people were going to schedule vacations, and he had any just routine personnel problems with his people, he and Mr. Morgan would settle that.

I would not necessarily become involved in that, because we have a lot of routine problems.

Now if it pertains to QA in any way, then I am involved.

Q QA in any way, and then it is in your--

A Yes, sir, than I'm involved.

Q I see.

A Yes, sir.

BY CHAIRMAN SMITH:

Q Well, Mr. Morgan would not normally-- Looking at his function as Vice President Systems Planning Coordination

WRB/ab2

1 Department, normally that would not include the function of  
2 quality assurance anyway, would it?

3 A Well, I don't know how to answer. We've got  
4 other functions similar to this. It funnels through there  
5 in our particular organization.

6 This coordination comes from the fact that he  
7 coordinates a lot of things that have to be coordinated  
8 between these three groups that report to me, plus there's  
9 three groups under the president of our company, and he does  
10 that coordination and makes sure that everything gets  
11 coordinated and gets done.

12 In other areas similar to this, he does some  
13 similar work.

14 Q It's a sort of a housekeeping box.

15 BY DR. LEEDS:

16 Q Well, for example, if I looked a little further  
17 down in that section-- and again it's not numbered so I  
18 can't tell what the number of pages are, but where the  
19 Corporate Nuclear Safety and Quality Assurance Audit Section  
20 is discussed it says:

21 "The Executive Vice President/Chief  
22 Operating Officer is briefed on corporate nuclear  
23 safety and quality assurance audit matters other  
24 than those covered by written reports on at least  
25 a quarterly basis."

WRB/ab3

1 And I don't find in there how he gets to you,  
2 other than by paper. Maybe I missed it.

3 A This is a quarterly face-to-face thing. He has  
4 a letter from me and all these gentleman have copies of it.  
5 He is required to contact my secretary every three months,  
6 at least every three months and arrange through her for an hour,  
7 two hours, three hours, whatever he things would be necessary  
8 for us to discuss the over-all corporate program.

9 And it's understood any time he has any problem  
10 at all of a QA nature and he needs my help on-- First, we  
11 would like him to go to these fellows. Usually they can  
12 straighten out 90 percent of it, or even department heads.  
13 That's the best place to get it straight.

14 But any time he thinks -- I leave it to his judg-  
15 ment -- that he thinks I should be involved, either he needs  
16 my help or he thinks it would be helpful for me to know about  
17 it, he comes special to me.

18 Q Okay.

19 But other than that, you get a three-month report  
20 of the status of --

21 A No. I get every QA audit report, the Chief  
22 Executive and I. That comes by memorandum directly to me.  
23 I have to sign that and send it back to him showing that I  
24 have reviewed that. I either put comments on it or I don't  
25 put anything.



WRB/eb4

1 Q Okay.  
2 So you get reports other than three-month reports?

3 A Oh, yes, sir. Every audit he performs is directed  
4 to me.

5 Q I see.  
6 In other words, he sends it to you?

7 A Yes, sir.

8 Q Did I understand Mr. Harris also gets a copy of it?

9 A He does.

10 Q Does he sign it, too?

11 A Yes, sir, with some nice little notes back to me  
12 regularly.

13 (Laughter.)

14 BY CHAIRMAN SMITH:

15 Q So he not only reads them, he takes action on  
16 them on a regular basis?

17 A Regularly. He doesn't miss any of them.

18 BY DR. LERDS:

19 Q Is there a particular reason why Mr. McManus  
20 isn't shown by dashed lines in there?

21 A No, this is not really prepared-- I mean this is  
22 something we do annually, and we just hurried up a little  
23 bit to get it ready for this. It was not prepared in any  
24 way special for this.

25 I would say if we had been preparing it special

WRB/ab5

1 for this, we probably would have shown it to clarify.

2 Q But normal corporate charts, they wouldn't show  
3 dashed lines for Mr. McManus?

4 A So far as we know, we don't have, unless it was  
5 prepared specially for something like this.

6 But his position description and all is included  
7 in there. There's no misunderstanding anywhere.

8 Q On page 5 of your testimony, you make the state-  
9 ment in line 5 that:

10 "Most important, we think we did it  
11 without compromising public health or safety."

12 And I asked yesterday of a Staff witness--  
13 Whenever I see a statement like that I can think of two  
14 possibilities: one, nothing happened and something was wrong,  
15 or that nothing was wrong, period, and nothing happened.

16 Do you follow me on what I'm asking there?

17 A Not exactly.

18 Q Okay.

19 Suppose I had turn signals on my car and they  
20 weren't working and I thought they were working and no accident  
21 happened; I was just lucky, versus turn signals not working,  
22 knowing about it, and I stick my hand out to guide myself,  
23 to warn the guy behind me.

24 So you can have a situation in which the public  
25 is not harmed because nothing happens, no accident occurred

WRB/eb6

1 during the interval that you were sitting there with things  
2 in a bad shape.

3 Now what do you mean by that statement then?

4 A I don't know of any situation where the appropriate  
5 action wasn't taken on anything we found, where anything  
6 didn't work perfectly. We didn't always make long-range,  
7 satisfactory solutions to them, but we took satisfactory  
8 interim steps.

9 As far as I was concerned, I don't think there  
10 was any danger to anybody.

11 Q The plant was always in a safe condition?

12 A That's right, not the way we hoped it would be  
13 but we took whatever interim steps were necessary to put it  
14 that way. This is what I was trying to say.

15 Q Mr. Jones, you thought it was important at page  
16 8 to discuss your safety program with respect to vehicles,  
17 and I would like to know how that ties in with nuclear safety.

18 A Well, I think it is just an attitude to show that  
19 we are corporate-wise and from a corporate standpoint we  
20 stress all kinds of safety.

21 Now I think the thing ties together. This was  
22 just to show that we are very much concerned about the  
23 safety of our employees, and that the nuclear program fits  
24 right in there.

25 Q And the same way with respect to linemen and other

WRB/eb7

1 kinds of Workman's Comp. type accidents?

2 A Yes, sir, it's a safety attitude. It's an atti-  
3 tude the corporation has toward safety, and that they try  
4 to get their people to have. And I think that it carries  
5 through even into home life.

6 It gives me a chance to brag a little bit, too.  
7 I have to admit that.

8 Q I have to admit I couldn't immediately see the  
9 connection between vehicle accidents and nuclear safety.

10 A Well, we're convinced that the attitude toward  
11 all safety really-- That's what we're working for, to get  
12 the attitude toward it.

13 Q On page 25 you mention you meet periodically or  
14 at least on a periodic basis with the Director of Corporate  
15 Health Physics. What is the period of your periodic meetings?

16 A At least quarterly. He reports also to Mr. Morgan  
17 in the identical situation that I described for Mr. McManus.

18 Q Okay.

19 On page 26 you mention that:

20 "Our objective in designing our  
21 corporate structure was to develop an organization  
22 suitable at least until the early-'80s...."

23 We're almost there. What kind of stuff are you  
24 thinking about for the late '80s and early '90s when Harris  
25 is going to be --

WRB/ab8

1           A       Whatever I tell you would be wrong, I can  
2 assure you of that.

3                   What I meant by this, an organization that  
4 basically is expanded. But we've already made some changes  
5 back at our big organization in '76 as far as refinements  
6 and things like this.

7                   You see, we grew very rapidly from a medium  
8 sized company to a large sized company. Our number of  
9 employees doubled, company-wide, between '68 and '76. On  
10 everything else we had a lot of growing-pain problems company-  
11 wide in absorbing this many people, acclimating them into  
12 our company.

13                   But we were becoming a big nuclear company. And  
14 this was one of the things we looked in our organization  
15 about. And I think that you can see the change in the  
16 organization. We moved-- Well, we have groups, departments,  
17 sections and units. That's our hierarchy. Everybody has  
18 to have some sort of hierarchy.

19                   But in this, anything pertaining to nuclear  
20 engineering, construction, all of it generally moved up  
21 in our hierarchy. Departments, they were split up and became  
22 groups; sections became departments. Mr. McDuffie, Mr. Utley  
23 and Mr. Morgan joined the senior management group that we  
24 refer to in here, you see, as part of senior management.  
25 We doubled the senior management group from five to ten.

4.140

WRB/eb9

1 actually, as a part of this reorganization.

2 Mr. McDuffie became Senior Vice President, Group  
3 Executive for all engineering and construction, transmission,  
4 everything. We do most all of our own transmission and  
5 substation engineering work. We've done that for years.  
6 The company grew up doing that.

7 Well, we put all of it together and made it a  
8 group under Mr. McDuffie with a department.

9 Mr. Utley was the Power Supply Department before  
10 the reorganization. Well, it had grown too big to be a  
11 department so we split his department into three departments:  
12 generation, system operation, and fuel. And they each became  
13 departments, and Mr. Utley became a group executive, a Senior  
14 Vice President covering those departments.

15 Q Well, what are you going to do in the late '80s?  
16 Are you going to keep with this?

17 A I really can't answer that. I think basically  
18 that-- There certainly will be some changes in that. As  
19 we grow, depending on our growth, we will reorganize again as  
20 appropriate.

21 Q But right now you see no need to change that  
22 structure?

23 A Yes, sir. We're looking ahead all the time. The  
24 Chief Executive Officer and I will retire on exactly the  
25 same day three and a half years from now. We're looking

WRB/abl0 1

2 toward that, and we're planning for that and we'll make  
3 appropriate changes, put the people in positions so that we  
4 won't be missed. And we'll be doing that this year.

5 Q If you look at page 27, you mention in item 10  
6 there which is on line 23 that:

7 "Operation and maintenance functions  
8 should be kept within one area of accountability."

9 Isn't there some built-in conflict between  
10 maintenance and operation?

11 A No, sir, not if that top man's the head of it.

12 I'll tell you what has happened to us all these  
13 years. When you have construction and maintenance together,  
14 construction always gets done and preventive maintenance  
15 will not get done. That's just the way it goes. But if one  
16 man is responsible for operation and maintenance then he  
17 cannot blame the folks that don't maintain it properly, and  
18 the maintenance folks can't say, "If those operators knew  
19 how to operate it." It just fits together.

20 Q There has been no problem with those fitting  
21 together?

22 A No, sir.

23 Q Do you have any explanation of why, at page 30  
24 for example, even though you have 15,000 applicants on page  
25 29, you seem to have, for example, in the Power Supply group  
300 people which I gather by rough calculation is -- what?

WRB/eb11

1 15 percent of the department unfilled? 10 percent of the  
2 engineering unfilled?

3 Is there any reason or is that just the normal  
4 circumstance that you have holes you never fill?

5 A This is right. We stay out ahead all the time.  
6 We fill them. These fellows come into the senior management  
7 and they get approval and there are some more of them there.  
8 But this is the concrete plan.

9 Once our folks have a box, whether they want to  
10 fill it at the middle of the year or next year or at the end  
11 of the year, they can concretely plan. They know that is  
12 approved. They have approval for that.

13 Some of them come in at the very first of the year  
14 with a request for that entire year and if they can prove  
15 their case, then they are granted those boxes. They may  
16 not intend to-- They may intend to take all year to fill  
17 them.

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WRB/mpbl

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Q When is your year?

A A calendar year.

Q You run on the calendar year?

A That's right.

Q Well, this data is for November 30. You only have one month left.

A Well, some of them -- Well, they showed some Harris boxes for a number of years that we knew wasn't going to be filled.

Q Okay.

So then it goes beyond one year?

A I said some people come in on an annual basis just for that year. But for long range planning, yes, sir.

Q These boxes aren't boxes that you would pull back at the end of the year? They're not Cinderella-type boxes?

A Well, we threatened them with the Sunset law one time, that at the end of the year, or at the first of the year you've got to come in and reprove them.

Q So that's true every year?

A That's what we did. I don't feel that we should enforce it quite strict enough this year.

Q So this in your mind, does this represent any problem in securing the number of people you need to operate, the fact that these things are unfilled?

WRB/mpb2

1 A No, sir, it does not.

2 Q In other words, it's just a miss in projecti  
3 of what you need that year?

4 A That's right, what these fellows are up to.  
5 Now these fellows have to tell our recruiting  
6 people, employee relations, how many people, what kinds of  
7 people, and all they want. They want them to recruit at the  
8 universities and the tech schools this year, and those people,  
9 then, of course, they have to make their plans. And, of  
10 course, all the plans are made and all of this.

11 But employee relations depends on all department  
12 heads to feed into them. But their requirements are for  
13 that year, you see.

14 Q Do the rest of you gentlemen agree that there's  
15 no problem with these slots being unfilled?

16 A (Witness McDuffie) I do.

17 Q Mr. Utley?

18 A (Witness Utley) Yes, I agree there's no problem  
19 with them being unfilled. But that doesn't mean that we're  
20 not working toward at all times filling the vacant positions.  
21 And of course, the increase in numbers in the organization  
22 will show exactly that, that we're continuing to increase  
23 numbers of people.

24 Q Well, you see the power supply section which  
25 I guess is the bulk supply, is that your section?

WRB/mpb3

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A Power supply is my responsibility, yes, sir.

Q It looks like it has one of the biggest, in percentage, of slots unfilled.

A Well, it very well may, because we are in the process of really bringing on more people than anybody else. And, of course, we're adding additional people to replace contract people throughout our organization, nuclear as well as fossil. And this in turn is bringing about more authorized positions than would be normally the case.

Q Could you use these 300 people this year, or maybe it's 250, I'm not sure about the exact number there.

A Well, yes. We will over the year certainly hire that number of people. That does mean at the end of the year that there won't be authorized positions that are not filled.

Q Well, my problem with this data is that this data is as of November 30, and if you're working on the calendar year, then presumably those slots were available at the beginning of the year.

A It's wrong to look at that on a calendar year. Those numbers are rolling, month in, month out.

For example, we very well will be going to the senior management committee for additional positions in certain categories that will add to that number, primarily because there's no authorized boxes for the categories that we will be requesting. And that number could roll

WRB/mpb4

1 between now and June, for example.

2 A (Witness Jones) Unless he has employed some,  
3 which I don't know, the number of vacancies has to go up  
4 because just as of this Monday the senior management  
5 committee approved some more boxes for him. So I don't know  
6 how it stands right now, but....

7 Q This is kind of old data, considering the  
8 situation.

9 A This is changing all the time.

10 A (Witness Utley) But, as an example, last fall  
11 we brought in 40 trainees to go into our nuclear training  
12 program to provide manpower for the Shearon Harris Plant.  
13 And this type action is continuing to take place.

14 We had 600 applications to select 40 people  
15 from.

16 BY CHAIRMAN SMITH:

17 Q That was the class that was to begin last month?

18 A Yes, sir.

19 Q Did it begin?

20 A Yes, sir.

21 BY DR. LEEDS:

22 Q I think you may have answered some of my ques-  
23 tions here on your Figure 6, Mr. Utley and Mr. Banks, on  
24 page 24, by some of the comments you made to Mr. Reis when  
25 you discussed -- Figure 11 on page 25. I'd still like to

WRB/mpb5

1 explore a little bit with you.

2 Mr. Jones I think used the word "difficult" in  
3 his testimony on page 4 or 5 about the period of time in  
4 '74 through '77, and I think you gentlemen used the word  
5 "severe" on page 53 of your testimony.

6 So I'd like to focus on that period of time  
7 and ask you some questions about this chart to make sure  
8 I understand what the status was of the company.

9 I gather the problem of trying to get the OL  
10 issued before the Cinderella situation with respect to the  
11 new EPCS final acceptance criteria occurred in December of  
12 '74, is that right?

13 A (Witness Jones) That's correct.

14 Q Okay.

15 So if I look at this chart I see essentially no  
16 growth in personnel at Brunswick until about the time you  
17 made the decision to put the big push in, and then I see an  
18 upward trend between mid-'74 and the beginning of '75, is  
19 that right? Is that jump in people at Brunswick due to the  
20 push on getting the OL license?

21 A Well, I have some figures here on Brunswick  
22 that I believe they were end of the year figures, end of 1974.  
23 Brunswick had 154 employees, according to that figure. At  
24 the end of 1975 they had 204. I'm not sure the source of  
25 our information is the same.

WRB/mpb6

1           A       (Witness Utley) Sir, I believe page 28 will  
2 show the personnel as it applies to Brunswick plant staffing,  
3 if that will be helpful.

4           Q       Okay. Pine. I'm with you now. I'm sorry.  
5 Thank you.

6                   Looking at the line on Figure 8 which is the  
7 Brunswick, it flattened in '76, is that right?

8           A       Well, the growth wasn't as sharp during that  
9 point in time, that's correct.

10          Q       And yet, for example, number two, I guess,  
11 Unit 2 commercial operation occurred right where it flattened,  
12 roughly. And then Brunswick Number 1, it took a spurt.

13                   So this correlates with when you put the units  
14 into operation, is that right?

15          A       Yes, sir, it does. And also it correlates also  
16 in regard to our management control of the Brunswick opera-  
17 tion during that period of time. It was during this period  
18 of time that we made some changes as far as management  
19 was concerned. And I would say that that definitely had some  
20 bearing in regard to that slope as you see it here, versus  
21 taking another sharp upturn about mid-1976.

22          Q       And the drop there we see, I guess at the end  
23 of '75, I can't tell from the chart how many people were --

24          A       That's about June '75. You're looking at where  
25 it tended to come down slightly to the beginning of '76. And

WRB/mpb7

1 then it started making an upturn and then in the latter part  
2 of '76 it started turning up rather sharply. And it has  
3 continued on the rather sharp increase since that point in  
4 time.

5 Q What am I supposed to interpret about these  
6 things?

7 A I think the proper interpretation is that it  
8 should be looked at in regard to the period '73 to '79, and  
9 what management's attitude has been in regard to providing  
10 sufficient staff to take care of the problems that prevailed  
11 at Brunswick.

12 And I think if you will look at the ratio by  
13 which we increased the staff on an annual, compounded  
14 annually, you will have to agree, I think, that it would  
15 not really be reasonable to have increased that staff at a  
16 more rapid rate and have maintained good control from a  
17 management standpoint.

18 DR. LEEDS: Off the record.

19 (Discussion off the record.)

20 DR. LEEDS: On the record.

21 CHAIRMAN SMITH: Let's take a five minute break.

22 (Recess.)

23 and 2e

24

25

2f  
WRB/abl

1 CHAIRMAN SMITH: Back on the record.

2 BY DR. LEEDS:

3 Q Mr. Utley and Mr. Banks, on page 45 at line 18  
4 you talk about significant daily delays in checking 800  
5 construction personnel into and out of vital areas.

6 Let me tell you why I'm asking these questions.

7 I worked in a place one time where we had to  
8 exchange badges and pick up radiation control badges going  
9 in and out of a plant, and there were 3,000 people employed  
10 at that plant. And so you know, I'm trying to think back  
11 on those times versus this, and I'm not sure I understand  
12 why 800 is a big problem. It looks to me like it might be  
13 15 or 20 minutes of swapping back and forth of the passes  
14 or something.

15 Am I mistaken?

16 A (Witness Banks) I think you're a little low on  
17 the number. I would say during the initial setup we had  
18 delays of a half hour or 45 minutes per man standing in line,  
19 so when you add 800 people up and put 30 minutes, that's 400  
20 manhours just trying to go through the security, of work time  
21 that you lost.

22 Q Well, then, if it is that many man-hours going  
23 through that, could I not add some extra security man-hours  
24 and cut it down significantly?

25 A The access into the plant and through the access



WRB/eb2

1 doors which you have, which is a limited number, adding  
2 security guards don't help. It's physically getting them  
3 through the barriers.

4 Q But that exists anyway, doesn't it, physically  
5 getting them through barriers?

6 A If they can come in, walking on their own time  
7 and they don't have to stop for security, getting the badges,  
8 getting checked, they don't back up like that.

9 Q So this was area-to-area within the plant, or was  
10 it area into the plant?

11 A Both.

12 Q Both.

13 So we're talking on the average of 30 minutes  
14 per person?

15 A I believe that's the number Construction used  
16 for that time. These were Construction force people that  
17 we were creating a problem for.

18 Q Mr. McDuffie, I noted, nodded Yes.

19 A (Witness McDuffie) Yes.

20 Q And it wouldn't have helped, Mr. McDuffie, to  
21 have some more guards?

22 A (Witness Banks) These were our guards created  
23 problems for him.

24 Q I know, but have some more guards so your people  
25 get through faster. Wouldn't it help?

WRB/eb3 1

2 A (Witness McDuffie) We looked into it and we just  
couldn't work out a way that was feasible.

3

Q Okay, that's what I wanted to know.

4

I gather on page 48 at the bottom of the page,  
5 line 14 onward, that you have some suggestions perhaps for  
6 how the NRC can work their program better so they wouldn't  
7 interfere so much with you. Is that correct?

8

I want to explore those with you a little bit.

9

10 Didn't you get advance warning of these things?  
Don't they publish drafts and ask you to comment on them?

11

These things don't sort of appear all of a sudden in the  
12 Federal Register in effect. I thought they had to publish  
13 them ahead of time and give you a chance for comment.

14

15 A (Witness Jones) Well, they do, and we comment  
16 sometimes. It works out that something is changed and  
sometimes it isn't changed.

17

18 Q Well, "little or no advance warning." I want to  
19 know what that "little or no advance warning" is, what it  
would be.

20

21 A (Witness Banks) What it's referring to right  
here is-- Let's say we have the regulation. We have read  
22 it and made our interpretation and we have implemented it.  
23 Now the people from NRC that's enforcing it come in and look  
24 at what we have done. They have a different interpretation,  
25 so they are now giving us this regulation which they have

WRB/eb4

1 no more than-- It's issued with no good guidelines.

2 We make a determination. They come in now and  
3 we're in non-compliance because they did not interpret the  
4 way we did.

5 Q Could you not just say, "Hey, we're getting ready  
6 to do A in line with regulation X? Do you have any comments  
7 on it?"

8 Do you not talk to Atlanta, or is this forbidden  
9 by Atlanta or in-house?

10 A There is much more free talking that the Commission  
11 is allowed to do to us today than they were back in '68, '70,  
12 '72. At one time they couldn't even tell us how another  
13 plant was doing things.

14 Q Okay.

15 So this just doesn't apply today. Is that right?

16 A Maybe not to the degree it did back then. I  
17 think there are more communications and better communications  
18 of what they're looking for, but it still applies today.

19 We just put into effect new security regulations.  
20 The new regulations went into effect on the 23rd of February.  
21 We have submitted to NRR what our security plan is. We've  
22 installed all that new equipment. We've gone through another  
23 evolution.

24 I am sure the way we interpreted our plan as  
25 approved by NRR, there will be disagreements between I&E

WRB/eb5

1 and us on what that plan is.

2 Q But it was approved by NRR?

3 A Right.

4 Q And does NRR not talk to I&E?

5 A I hope they do. But this happens every time.  
6 It's a thing that happens.

7 Q Well, there are gentlemen in the back of the  
8 room hearing this response.

9 DR. LEEDS: I guess I really ought to ask,  
10 Mr. Minor back there, or Mr. Dance back there, or Mr. Long,  
11 Mr. Murphy, do you have any comments to make about this  
12 problem?

13 MR. MURPHY: I think Mr. Banks has described a  
14 recognized problem here, and we do work with it. And in  
15 fact I was talking to Mr. McDuffie a few minutes ago about  
16 Part 21, and giving some words of caution there.

17 I would refer you people to some of the conver-  
18 sations, questions, answers that have gone on in this hearing  
19 room, and the difficulty of one person understanding what  
20 another person actually intended. I transmit, he receives  
21 something else. Well, I think I transmit, he receives some-  
22 thing else. This is quite true.

23 Our inspectors have day-to-day contacts with the  
24 NRR people, but you go into the real life and it's the  
25 situation that arises at the moment that causes the problem.

WRB/eb6

1 We do give positions as we are aware of them  
2 now which we flatly could not do some few years ago. But  
3 even with the day-to-day types of communications with NRR,  
4 I am sure that their people will read the words one way  
5 and the CP&L people will read it the other way, and we will  
6 read them another way.

5.110

7 And the bottom line is try it and then see what  
8 happens when the enforcement action is taken.

9 BY MR. LEEDS:

10 Q On page 79, you mention there are 12 to 40 million  
11 records that are generated during the lifetime of a nuclear  
12 plant which must be retrieved. Sometimes records may be--  
13 A record may be very long or it may be just a byte in a  
14 computer.

15 So what do you mean by 40 million records? Is  
16 this pieces of paper, or what?

17 A (Witness Barks) It could be one sheet as a mill  
18 test report, or it could be a complete procedure of 10 or 12  
19 pages.

20 Q Okay.

21 Let me ask you, on page 97, about wage scales.

22 If we talk about mobile people, not Mobil Oil  
23 people but people who move from one part to another part  
24 of the country, I gather you don't just compete with local  
25 utilities around you. Wouldn't you compete for engineers

WRB/ab7<sup>1</sup>

2 who work in California or work in Maine or Florida, or  
3 someplace like that?

4 A (Witness Jones) I can answer that. No, sir, we  
5 do not try that. We get one occasionally from there, but  
6 that's not our recruiting effort.

7 We recruit primarily in the Southeast. We're  
8 probably-- Well, I know the Employee Relations, the recruit-  
9 ing folks, the last count I had, had 22 or 23 universities  
10 in the South, generally in the Southeast.

11 Q And that's the same way with people who are not  
12 at the university level but that you might employ after some  
13 years of experience? You recruit in this area?

14 A Yes, sir, unless we run into national magazines  
15 or something like that when we're trying to get highly  
16 experienced people, or through the so-called head-hunters.  
17 That's another source when you're trying to fill a parti-  
18 cularly important position that requires spec. experience  
19 and all of this.

20 Everybody in the United States, when they start  
21 recruiting for those kind of people, recruit all over the  
22 United States.

23 Q So in those cases what are your wages competitive  
24 with?

25 A We've gotten some of them. Those are individual,  
special cases. But where our recruiters from Employee

WRB/eb8

1 Relations are doing it, general recruiting is what we try to  
2 compete with.

3 A (Witness Utley) When you really look at our  
4 standard of living and the cost of living in this area and  
5 apply it over the country, and look at our salaries, I think  
6 you'd come to the conclusion that our salaries are competitive  
7 over the country, even though we don't recruit in other  
8 areas.

9 And we do recruit out of these Navy programs on  
10 the East Coast, and out of those programs we get people from  
11 all over the United States, to some extent. And these people  
12 are also looking at other companies, and we get our fair  
13 share of these people. When they look at the benefits we've  
14 got as far as living conditions in the North Carolina-South  
15 Carolina area, and the salaries, we line up very well.

16 BY CHAIRMAN SMITH:

17 Q Mr. Jones, while we're on the subject of wages,  
18 you indicated that in early '74 when you put into effect your  
19 Income Improvement Program that you asked your people to  
20 take a five percent cut, you said for two or three months,  
21 and then I think later on, you said three or four months.

22 A (Witness Jones) I checked and it was actually  
23 for four months. Let me explain a bit.

24 Our Income Improvement Program started back in  
25 early '74. Now this salary action was taken the first of

WRB/eb9

1 '75, I believe February 1st.

2 Q The first of '75?

3 A Yes, sir. And it ran for four months there in  
4 '75.

5 Q Okay.

6 Now you had indicated that for many, many years  
7 prior to that you had maintained comparability with similar  
8 disciplines in the community involved, and also in adjacent  
9 utilities.

10 A That's right.

11 Q And I would imagine that over the years since the  
12 War that there would be a gradual increase, or maybe not so  
13 gradual.

14 A There's been a lot of increases.

15 Q But in this instance, after the wage cuts were  
16 restored, did you go back to the competitive situation, or  
17 did you just restore them to the --

18 A We went back and instituted-- Our policy was  
19 announced by the Chief Executive Officer that we were now  
20 back on that. When he announced it he said "tentatively"  
21 or "temporarily," and he announced when we were back on  
22 normal. And we have been back on normal for a couple of  
23 years now.

24 Q That is normal, and it's continuing your in-  
25 creases as you feel the competition requires?



WRB/eb10

1           A       Yes, sir.

2                    It's one of the responsibilities of the Employee  
3 Relations Department to keep informed on what is going on  
4 all around us, also in the schools. Now we're very much  
5 interested in what are the starting salaries now in the  
6 schools. It is one of their responsibilities to find out  
7 this kind of thing, and make projections for us.

8           Q       Okay.

9                    Now one other question on personnel and that is:  
10                    When you require that the SRO desirable asterisks  
11 be placed on those supervisory level spots for Brunswick,  
12 you explained why. But was that particular chart a chart  
13 for general corporate purposes or was it a chart that was  
14 actually prepared for the PSAR?

15           A       Well, a chart, to be official, has to be put out  
16 by the Budget Committee or our Senior Management Committee  
17 and it's stamped by them, and that's the chart I had it put  
18 on, because it showed corporate level had approved it that  
19 way.

20           Q       That's not exactly my question. For what purpose  
21 was that chart prepared?

22           A       Well, this is given to the people; each group,  
23 each department has their own charts that are these official  
24 charts, you see.

25           Q       Yes, sir.

WRB/eb11

1 But my question is was the chart prepared for  
2 inclusion in the PSAR or was it prepared for another purpose  
3 and it just happened to find its way into the PSAR?

4 A Sir, I do not recall. I can recall I required  
5 it to be an official chart.

6 BY DR. LEEDS:

7 Q Mr. McDuffie, on page 52 of your testimony you  
8 mention at the top of the page about a make-up schedule  
9 which anticipates accomplishing three years' work in two  
10 years, thus making up a year consumed in licensing that was  
11 not anticipated.

12 What year in licensing are we talking about?

13 A (Witness McDuffie) When our hearing was stopped  
14 in '74, we had reached a point that the only outstanding  
15 issues were ability to finance and need for power. And in  
16 our planning subsequent to that, looking at what the rest of  
17 the industry was doing and looking back on what had happened  
18 to us at Brunswick, we concluded that a reasonable schedule  
19 for Harris would be about 78 months.

20 And thinking that we only had a couple of issues  
21 to face, we resumed licensing, hoping and really expecting  
22 to get a permit about the first of '77. But we got into many  
23 issues other than ability to finance and need for power, and  
24 we did not get the license until January '78.

25 Now instead of compressing our whole schedule,

WRB/eb12

1 we decided that we'd take the first three years in our planned  
2 schedule and try to accomplish them in the first two years,  
3 compressing the concrete portion, leaving the original time  
4 for electrical and mechanical, where in the past we've had  
5 most of our problems.

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1 Q This just shows we read almost everything-- We  
2 read everything you send us. And some of it we read very,  
3 very carefully.

4 I just want to indicate that in Applicant's  
5 Exhibit HH, though it was revised on 11 January, page 47  
6 needs a correction. We are no longer the U.S. Atomic Energy  
7 Commission.

8 (Laughter)

9 We're the Nuclear Regulatory Commission.

10 A Thank you, sir.

11 Q I presume it will be corrected?

12 A Yes, sir.

13 I do hope you don't write us up for a non-  
14 conformance, though.

15 (Laughter)

16 CHAIRMAN SMITH: We don't have anything further.

17 Do you want recross? Do you have recross,  
18 Mr. Reis? --or additional cross, I mean?

19 MR. REIS: Yes, I have a couple of questions.

20 CROSS-EXAMINATION (Resumed)

21 BY MR. REIS:

22 Q Mr. McDuffie, in the security program the  
23 employees, the construction employees entering the plant,  
24 why did you have only one line instead of two lines for the  
25 employees? --and only one entry?

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WRB/wb2

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A (Witness McDuffie) I believe we have two.

Q For the construction employees there was only one entrance, wasn't there?

A You mean during this current modification?

Q During the time that you say you were held up because of the new security regulations. I think it was in 1974, or early '75.

A In our earlier discussion I had thought we were talking about the current modification.

Q Can I direct you to page 45 of Mr. Utley's testimony?

A This was a gateway put up in the tunnel. You enter Unit 1 at the opposite end of the two units, and then you come back through the tunnel to Unit 2. And that area just does not lend itself to more than a single station.

Q I see.

And all eight hundred employees had to go through that tunnel every day at the same time?

A It was approximately eight hundred finishing up that work on Unit 2, going back and forth through that gate, yes.

Q Mr. Jones, you said the salary limitations as part of the earnings improvement program lasted only four months. Why did it end after only four months?

A (Witness Jones) Because it was the last thing we

WRB/wb3

1 put into effect, and our Chief Executive said it would be  
2 the very first thing he would lift off as soon as possible.

3 Q You didn't lift it because there were too many  
4 employee complaints, did you?

5 A No, sir.

6 Q There's been talk here about what is required  
7 by NRC, and that sometimes there are holdups in transmission  
8 of information between one office in NRC and another as to  
9 what is the regulatory requirement.

10 But you also face that problem in your own  
11 organization, don't you, at times? You don't have absolutely  
12 smooth communications between your regulatory department  
13 and your operating department at all times, do you?

14 A They're not absolutely perfect; no, sir.

15 A (Witness Utley) I would agree with that; yes, sir.

16 MR. REIS: That's all I have.

17 CHAIRMAN SMITH: Mr. Gordon?

18 MR. GORDON: I have nothing.

19 CHAIRMAN SMITH: Mr. Erwin?

20 MR. ERWIN: A thousand times No.

21 CHAIRMAN SMITH: Is there redirect, gentlemen?

22 MR. JONES: No redirect.

23 CHAIRMAN SMITH: You'd better get out. You're  
24 excused. Thank you very much.

25 (Panel excused)

WRB/wb4

1 CHAIRMAN SMITH: Although they are excused, at  
2 your discretion you might want to have a representative of  
3 this panel be available for our questions on quality  
4 assurance.

5 Oh, that's right: Mr. Banks will remain here.

6 MR. JONES: Yes, sir.

7 Mr. Chairman, we would call to the stand  
8 Messrs. Banks, McManus and Loflin.

9 Whereupon,

10 HAROLD R. BANKS

11 resumed the stand as witness for and on behalf of the  
12 applicant and, having been previously duly sworn, was  
13 examined and testified further as follows:

14 Whereupon,

15 LEONARD IRA LOPLIN

16 and

17 SAMUEL McMANUS

18 were called as witnesses for and on behalf of the applicant  
19 and, having been first duly sworn, were examined and testified  
20 as follows:

21 DIRECT EXAMINATION

22 BY MR. JONES:

23 Q Beginning with Mr. Loflin, would you each state  
24 your full name, please, for the record?

25 A (Witness Loflin) Leonard Ira Loflin.

5.360

WRB/wb5 1

A (Witness McManus) Samuel McManus.

2

A (Witness Banks) Harold Banks.

3

Q Mr. Loflin, I hand you a statement of professional qualifications, and I ask if you can identify that as a statement that you prepared?

4

5

6

(Handing document to the witness)

7

A (Witness Loflin) I can.

8

Q And is it true and accurate, or do you have any corrections of any sort to make to it?

9

10

A No, it's true and accurate.

11

MR. JONES: Mr. Chairman, I would move that Mr. Loflin's statement of professional qualifications be incorporated in the record at this point. Copies have previously been furnished to all the parties and to the Reporter.

12

13

14

15

16

CHAIRMAN SMITH: And to the Board?

17

(Document handed to the Board)

18

MR. JONES: And to the Board.

19

CHAIRMAN SMITH: They are received and will be bound into the transcript as if read.

20

21

(Professional qualifications of

22

LEONARD IRA LOFLIN follow :)

INSERT 23

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25



PROFESSIONAL QUALIFICATIONS  
OF  
LEONARD IRA LOFLIN

Manager - Engineering Pool,  
Carolina Power & Light Company

I. Education

- A. B.S. Degree in Electrical Engineering from Clemson University -  
February, 1964
- B. Degree in Nuclear Engineering from North Carolina State  
University - June, 1969
- C. Reactor Operator Training Programs
  - 1. Westinghouse Corporation, Saxton Plant:  
AEC Reactor Operator License February, 1970
  - 2. Virginia Electric & Power Company, Surry Plant:  
AEC Senior Reactor Operator License, April, 1972

II. Utility Experience

- A. 1960 to 1963
  - 1. Duke Power Company
    - a. Three summer work periods at Buck Steam Plant,  
Spencer, N. C.
    - b. One summer work period at Greenville, S.C., Distribution  
Engineering Office
- B. February, 1964 to June, 1973
  - 1. Virginia Electric & Power Company
    - a. Assistant Engineer, Yorktown Power Plant (two 165 MWe  
fossil fired units): February, 1964 to November, 1964  
  
Participated in maintenance and modifications of plant  
control systems. Responsible for plant performance  
testing and monitoring.
    - b. Assistant Engineer: November, 1964 to May, 1965  
  
Associate Engineer: May, 1965 to January, 1967  
  
Engineer: January, 1967 to May, 1967

Mt. Storm Power Plant (two 565 MWe fossil fired units)

Assignment to Mt. Storm was made prior to initial phases of first unit startup. As the only non-supervisory utility engineer assigned to the plant during startup of both units, I was integrally involved in all Engineering, Operations, and Maintenance facets of startup on both units.

- c. Engineering Supervisor, Mt. Storm Power Plant: May, 1967 to September, 1968

Supervisory and Technical responsibility for all station engineers, chemists, instrument technicians, laboratory technicians, coal handling foremen, and coal handling union personnel. Handled contract interface and execution on station level between fuel vendors and VEPCO.

- d. Staff Engineer, Richmond, Va.:

September, 1968 to June, 1969

Assigned to N.C. State University

- e. Assistant Operating Supervisor, Surry Nuclear Power Plant (two 2441 Mwt Pressurized Water Reactors):

June, 1969 to September, 1972

Responsible involvement: Core loading; initial criticality; escalation to power; pre-operational startup of all plant systems, both secondary and primary; scheduling and organization of operations department; interface relations with Stone & Webster (A.E.), Westinghouse, and Atomic Energy Commission; organization and coordination of Nuclear training.

- f. Operating Supervisor, Surry Nuclear Power Plant (two 2441 Mwt Pressurized Water Reactors): September, 1972 to June, 1973

Responsible for all plant operational functions. Conducted escalation to rated power of Unit I. Directly supervised core loading, initial criticality, and escalation to power of Unit II. Personnel responsibility for forty-five (45) operators and eleven (11) first line supervisors.

C. June, 1973

- 1. Carolina Power & Light Company

- a. Principal Engineer, Power Plant Engineering Department: June, 1973 to August, 1975

b. August, 1975 to June, 1976

Manager - Corporate Nuclear Safety Section, Special Services Department. Transferred from Power Plant Engineering Department.

c. June, 1976 to November 30, 1976

Manager - Corporate Nuclear Safety Section, Technical Services Department.

d. December, 1976

Manager - Corporate Nuclear Safety Section, System Planning & Coordination Department.

e. December 14, 1976

Transferred to Power Plant Engineering Department as Manager - Nuclear Plant Engineering Section.

f. January 13, 1977

Reassigned as Manager of Engineering Pool Section of the Power Plant Engineering Department.

III. Professional Societies

A. ANS

B. P.E. - California - 1976

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BY MR. JONES:

Q Mr. McManus, did you previously prepare written direct testimony which has been distributed to the parties and to the Board in this proceeding?

A (Witness McManus) Yes, I did.

Q Do you have any corrections to make to that testimony?

A No.

Q Is it true and correct to the best of your knowledge and belief?

A It is.

Q And do you adopt it as your direct testimony in this proceeding?

A I do.

MR. JONES: Mr. Chairman, I would move that Mr. McManus' previously distributed direct testimony, written direct testimony, be received in evidence and be set forth in the transcript as if read.

CHAIRMAN SMITH: It is so received.

(Direct testimony of SAMUEL McMANUS on behalf of Applicant follows:)

INSERT

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY & LICENSING BOARD

In the Matter of )  
CAROLINA POWER & LIGHT COMPANY ) DOCKET NOS. 50-400,  
(Shearon Harris Nuclear Power Plant ) 50-401,  
Units 1, 2, 3, and 4) and 50-403

DIRECT TESTIMONY OF SAMUEL MCMANUS  
ON BEHALF OF APPLICANT

1 Q. Will you please state your full name and business address?

2 A. My name is Samuel McManus. My business address is Carolina  
3 Power & Light Company, 411 Fayetteville Street Mall, Raleigh,  
4 North Carolina 27602.

5 Q. Mr. McManus, by whom are you employed and in what capacity?

6 A. I am employed by Carolina Power & Light Company, where I am  
7 the Manager of the Corporate Nuclear Safety & Quality Assurance  
8 Audit Section.

9 Q. Will you please summarize your educational and professional  
10 background and experience?

11 A. My education includes separate B.S. Degrees in Industrial  
12 Engineering, in Nuclear Engineering, and in Engineering  
13 Mathematics from N. C. State University, Raleigh, North Carolina.  
14 I am a registered Nuclear Engineer in the State of California.

15 From June, 1960 until May, 1964, I was employed by Carolinas-  
16 Virginia Nuclear Power Associates, Inc., (CVNPA). During the  
17 four-year period with CVNPA, my responsibilities included: three

1 months at N. C. State University in operations and analysis training  
2 on the NCSCR-3 heterogeneous research reactor; nine months of  
3 operations training at the Materials Test Reactor, Nuclear Reactor  
4 Test Site, Idaho (on loan to Phillips Petroleum Company from  
5 CVNPA); thirteen months spent writing original plant operating  
6 procedures, writing preoperational test procedures, supervising  
7 preoperational tests, and evaluating plant systems; three months  
8 in conducting a six weeks training program for the operations  
9 supervisor, three shift supervisors, and six technicians to prepare  
10 them for the operators hot license examination; and twenty months  
11 operating the test reactor as Shift Supervisor.

12 At the Atomic Energy Commission's Space Nuclear Propulsion  
13 Office, Jackass Flats, Nevada, I served as a Reactor Test Engineer  
14 from May, 1964 to January, 1968. Activities in this position  
15 consisted of: serving as site representative at the Nuclear  
16 Rocket Development Station for the Cleveland Extension of the  
17 Space Nuclear Propulsion Office; participating in development  
18 of test plans, facility requirements, facilities activation plans,  
19 and preparation and review of the necessary documentation for  
20 testing of nuclear reactor engines for the Nerva (Nuclear experimental  
21 rocket vehicle application) Project; serving as a member of the  
22 Test Specification and Procedure Review and Test Review Boards  
23 which had jurisdiction over Nuclear Test Operations testing Test  
24 Article Design Changes; reviewing and/or approving AEC required  
25 Safety Analysis Reports, Programmatic Test Plans, Test Specifications,

1 Operational Procedures, and other documentation where Space Nuclear  
2 Propulsion Office-Cleveland/Nuclear Rocket Development Station  
3 Resident Office input was required.

4 In January, 1968, I became a Staff Engineer with the AEC's  
5 Division of Reactor Licensing, Operating Reactor Branch 2, until  
6 September, 1970.

7 I joined Carolina Power & Light Company in 1970. From September,  
8 1970 until December, 1976, I was Manager - Nuclear Plant Engineering  
9 Section, Power Plant Engineering Department. In December, 1976, I  
10 became Manager - Corporate Nuclear Safety Section in the System  
11 Planning & Coordination Department until November, 1977 when I  
12 assumed the position of Manager - Corporate Nuclear Safety &  
13 Quality Assurance Audit Section (CNS&QAA), System Planning &  
14 Coordination Department.

15 Q. What is the purpose of your testimony?

16 A. Mr. J. A. Jones described the Corporate Nuclear Safety & Quality  
17 Assurance Audit Section which I head in his pre-filed testimony.  
18 Subsequently, the Atomic Safety & Licensing Board issued an Order  
19 asking that as Manager of this Section I be available for questioning  
20 at the hearing. Among other things, the Board is presumably  
21 interested in further details about the functioning of the CNS&QAA  
22 Section. The purpose of my testimony, therefore, is to amplify  
23 the brief description of Corporate Nuclear Safety & Quality Assurance  
24 Audit found in Mr. Jones' testimony.

25 Q. Focusing first upon the Nuclear Safety Unit, would you generally

1 describe the work this Unit does and include in your description  
2 a brief history of how these same tasks were performed within the  
3 Company prior to formation of the Unit? In addition, please  
4 provide general information on the qualifications of the CP&L  
5 personnel currently staffing the Nuclear Safety Unit.

6 A. The Nuclear Safety Unit is responsible for conducting independent  
7 off-site review of CP&L's nuclear facility operations. The  
8 Unit investigates all activities conducted by CP&L's operating  
9 nuclear facilities that are directly or indirectly related to  
10 nuclear safety. These investigative activities include: plant  
11 modifications, procedure changes, Technical Specification changes,  
12 reportable occurrences, Plant Nuclear Safety Committee (PNSC)  
13 meetings, issues documented by other review groups (including  
14 NRC inspectors), and any other items deemed appropriate by the  
15 plant managers or the members of the Unit. Administrative controls  
16 have been established such that the Nuclear Safety Unit receives  
17 copies of all pertinent documents falling into the above categories.  
18 Once received, the documents are logged and routed for assignment  
19 and detailed review (these actions are covered by specific Nuclear  
20 Safety Unit procedures approved for this purpose). Reviews are  
21 documented and the results are placed in our files for a specified  
22 retention time. Before filing, a recommended course of action  
23 is reported for each item by one or more Project Engineers.  
24 The Principal Engineer must concur with the recommended action.

25 We currently have one Manager, three Project Engineers, and



1 one Principal Engineer assigned to the Nuclear Safety Unit.  
2 Combined, these personnel have 72 years of engineering experience  
3 with 60 of these years related to nuclear applications. Moreover,  
4 several of the individuals have attended nuclear safety short  
5 courses, military schools related to engineering, and sessions  
6 dealing with other aspects of their positions (e.g., quality as-  
7 surance, personnel management, and administration).

8 CP&L has performed independent off-site review of nuclear  
9 facility operations since 1971 when the Robinson Unit 2 was  
10 started up. Prior to January, 1976, this function was performed by  
11 a group of managers assigned to the Company Nuclear Safety Com-  
12 mittee (CNSC). The CNSC included the Managers of Fuel, Generation,  
13 Nuclear Generation, Engineering, and Special Services. Originally,  
14 the Chairman and Vice Chairman of the CNSC were management members.  
15 Later the Chairman and Vice Chairman of the CNSC were permanently  
16 assigned and were not in the CP&L line organization. All members  
17 were assigned to the CNSC as a collateral duty. The primary  
18 reason for the changeover to a permanent organization in January,  
19 1976 was the increased number of review items brought about by the  
20 addition of the Brunswick units and the acknowledgement of the  
21 increased responsibilities of the management members in their  
22 primary job. This indicated a need to have a staff dedicated to  
23 the off-site review function.

24 Q. How and against what criteria does the Unit review operating plant  
25 procedure changes?

1 A. The Unit reviews both plant procedure and facility changes related  
2 to safety in accordance with 10CFR50.59 and the guidelines developed  
3 in ANSI N18.7: The overall objective is to ensure that all safety-  
4 related changes are within the envelope of considerations described  
5 in the FSAR and analyzed in the SER. The first consideration  
6 given to these reviews is the determination of "unreviewed safety  
7 questions" (a term of art in the NRC) and/or changes to the  
8 Technical Specifications. Beyond that the change is considered  
9 for its safety impact (both direct and indirect) on the operating  
10 facility. The mechanics of the review process are detailed in  
11 our Unit procedures and are summarized below. Each safety-related  
12 change is evaluated by the on-site review group, PNSC. If the  
13 change contains an unreviewed safety question, Technical Speci-  
14 fication change, FSAR change, or is deemed safety-significant by  
15 the plant manager, it is forwarded to the Unit for independent  
16 review. Upon receipt the change is logged into the Unit and sent  
17 to the Principal Engineer for further assignment. Depending on  
18 the extent of the change and the disciplines or areas involved,  
19 the Principal Engineer assigns the detailed review to one or more  
20 of the Project Engineers in the Unit. He specifies items to be  
21 included in the review and also indicates the time frame in which  
22 the review is to be completed.

23 I would like to point out that with respect to both time and  
24 detail, the Project Engineer has a significant amount of latitude  
25 in carrying out the assignment. Sometimes he will uncover additional

1 details that need to be considered in the review that were not  
2 earlier specified, or a given review may produce unforeseen complexities  
3 that require more time than first estimated. In these instances,  
4 the Project Engineer feeds back information to appropriate personnel  
5 and adjusts the scope and time as necessary with the concurrence of  
6 the Principal Engineer, and/or myself. To complete the process  
7 of reviews, once the Project Engineer is satisfied that the as-  
8 signment is finished, he documents his comments and sends the  
9 package to the Principal Engineer for concurrence. The Principal  
10 Engineer evaluates the package. If satisfied, he sends it to me  
11 for final approval and filing. If not satisfied, the Principal  
12 Engineer returns the package to the reviewer with specific comments  
13 that need resolution before approval. For each item reviewed, at  
14 least three specified signatures are required to show that the  
15 item has been adequately evaluated. The final signature is normally  
16 mine. In all cases where Technical Specification changes are  
17 submitted to NRC or where a modification or test constitutes an  
18 unreviewed safety question, prior formal approval must be obtained  
19 from CNS&QAA. In the case of modifications which do not constitute  
20 an unreviewed safety question, an approval memorandum is required  
21 but the modification work can proceed before receipt.

22 Q. In what manner does the Nuclear Safety Unit interface with nuclear  
23 licensing?

24 A. The Nuclear Licensing Unit within CP&L is the coordination point  
25 for most CP&L-NRC interaction; therefore, the Nuclear Safety Unit

1 works with the Licensing Unit in the evaluation of Technical  
2 Specification changes and correspondence from the NRC.  
3 The Nuclear Safety Unit will have the responsibility for  
4 writing the Independent Review Section of the FSAR for the Harris  
5 Plant. In addition, the Unit receives Harris correspondence to and  
6 from the NRC on such items as: NRC I&E Inspection Reports,  
7 10CFR50.55(e) deficiency reports, and QA Inspection Reports. These  
8 are periodically checked even though the Independent Review program  
9 does not formally commence until fuel loading for Unit 1.

10 Q. What do you mean when you say that the Unit "reviews unreviewed  
11 safety questions"?

12 A. The term "unreviewed safety question" is described in 10CFR50.59(a)(2).  
13 It, in essence, refers to events that either are not covered or  
14 analyzed in the safety analysis report or reduce the margin of safety  
15 from that described in the safety analysis report or plant Technical  
16 Specifications. It is first the responsibility of the Plant Nuclear  
17 Safety Committee to identify unreviewed safety questions to the  
18 Nuclear Safety Unit. However, it is also the responsibility of  
19 the Nuclear Safety Unit to assure that the PNSC has done its job  
20 and that there are no unidentified, unreviewed safety questions in  
21 Technical Specification changes, special tests, or modifications.  
22 Each change to an operating facility forwarded to the Nuclear Safety  
23 Unit is reviewed to ensure it contains no unreviewed safety question.

24 Q. In what way does the Nuclear Safety Unit review plant License Event  
25 Reports and regulatory noncompliances?

1 A. All License Event Reports (LERs), abnormal operational occurrences,  
2 and NRC Inspection reports and responses are forwarded to the Nuclear  
3 Safety Unit for review. The object of this review is to evaluate  
4 the incident, assure that corrective action is adequate and appropriate  
5 to preclude (or at least minimize the probability of) recurrence,  
6 and determine the overall safety implication of the event, e.g.,  
7 comparing a LER with similar events in the industry. These reviews  
8 are normally conducted by a combination of document review and  
9 discussions with cognizant personnel on the plant staff. A  
10 significant number of these reviews are conducted at the plant  
11 site.

12 Q. To what extent does the Nuclear Safety Unit inspect plant activities  
13 or affirmatively look for safety problems which may not be receiving  
14 adequate attention?

15 A. Almost every plant trip made by members of the Nuclear Safety Unit  
16 includes a tour of the plant facilities to look for items or  
17 areas that might impact nuclear safety. The results of these  
18 tours are documented by individual trip reports covering all aspects  
19 of the items reviewed or inspected while at the plant. Additionally,  
20 the Unit conducts a quarterly statistical sampling of all procedure/  
21 facility changes for each plant to ensure that the Plant Nuclear  
22 Safety Committee is forwarding all items requiring off-site review  
23 and has a procedure by which it selects certain nuclear safety  
24 items for in-depth evaluation. Engineers in the Nuclear Safety  
25 Unit also attend national meetings and short courses on nuclear

1 safety to gain perspective of what is happening at other facilities.  
2 Keeping track of industry trends is also part of the normal work  
3 load handled by the Unit. This is accomplished by use of NRC  
4 LER computer tapes to search out potential problems and by reading  
5 documents such as Atomic Clearinghouse Reports, LISTEN, and monthly  
6 NRC summaries of LERs for all operating facilities.

7 Q. How does the Nuclear Safety Unit assure that corrective actions  
8 are given appropriate priority?

9 A. The Nuclear Safety Unit assesses the status of outstanding safety-  
10 related items. This is done by informal follow-up items generated  
11 by the Project Engineers and a bimonthly report of recommendations  
12 and concerns. The first step in encouraging a resolution of a  
13 given item is direct contact between the Unit Project Engineer and  
14 the appropriate individual on the plant staff. If this fails to  
15 produce the desired results, an informal follow-up item may be  
16 reclassified to a formal concern or recommendation (such concerns  
17 and recommendations require a formal response from the Manager of  
18 Nuclear Generation and are carried on the bimonthly report, which  
19 is discussed below). Once the item is on the bimonthly report,  
20 a "Management Advise ment" may be initiated if the commitment  
21 does not appear sufficient to resolve the problem by the pre-  
22 established target date. I would like to point out that almost  
23 all safety-related items identified by CNS are resolved well  
24 before getting to the point of listing them as "Management Advise ment"  
25 issues.

1 Q. Mr. Jones mentioned in his testimony that you prepare a bimonthly  
2 summary of outstanding concerns with target dates for corrective  
3 action and you just referenced to such a report in response to  
4 the last question. Could you provide a little bit more information  
5 about these reports and say something about how they are actually  
6 used within the Company?

7 A. The bimonthly summary referred to in Mr. Jones' testimony is the  
8 Nuclear Safety Unit report that lists formal safety-related concerns  
9 and recommendations and their status. Resolution target dates  
10 are included in the report as well as the actions planned to close  
11 the item. This report is sent to members of CP&L's senior management  
12 team, specifically Messrs. Harris, Jones, and Utley, and gets wide  
13 dissemination at other management levels throughout the Company.

14 Q. Are there any other formal reports or means of communicating nuclear  
15 safety concerns which you utilize?

16 A. Yes. We have a quarterly report based on a statistical sample  
17 which provides management an indication of whether the Plant  
18 Nuclear Safety Committee is properly determining which items to  
19 send to the CNS&QAA. It also ensures the Nuclear Safety Unit  
20 is receiving the items it should. In addition, a trip report is  
21 generated and distributed each time a Nuclear Safety Unit member  
22 visits an operating facility. This report describes in detail the  
23 items covered during the trip and the status of those items. Copies  
24 of these reports are sent to the Manager of Nuclear Generation and  
25 the appropriate plant manager as well as the other members of the Unit.

1           Finally, on at least a quarterly basis, I have a meeting with  
2 CP&L's Chief Operating Officer, Mr. Jones. These periodic briefings  
3 afford me the opportunity to discuss aspects of nuclear safety, to  
4 advise senior management of trends that have the potential for  
5 affecting nuclear safety, and to present an overview of our nuclear  
6 operations from the CNS&QAA vantage point.

7 Q. How much independence do you have in your position and how free  
8 are you to bring nuclear safety matters to the attention  
9 of various levels of management within the corporate organization?

10 A. I am completely free to contact any person in the Company on  
11 nuclear safety matters. Mr. Jones' memorandum on Corporate Nuclear  
12 Safety Policy dated November 17, 1977, states that I am free "to com-  
13 municate directly to corporate management up to and including the  
14 Chairman/Chief Executive Officer to resolve any nuclear safety concern."

15           Organizationally, I am in a staff position and have no  
16 objectives other than to assure the safety of CP&L operating  
17 nuclear power plants.

18 Q. In addition to your duties as Section Manager over Corporate Nuclear  
19 Safety, I understand from Mr. Jones' testimony there are three separate  
20 Quality Assurance Audit Units which you also supervise. Would  
21 you describe generally how each goes about auditing the Company  
22 activities it is charged with reviewing?

23 A. Each of the three Quality Assurance Audit Units has a different  
24 area to audit. First, the Operation & Maintenance Unit is charged  
25 with auditing the Corporate Quality Assurance Program, Part 2 -



1 Operation and Maintenance, and Part 3 - Nuclear Fuel. In auditing  
2 operating nuclear plants, the following criteria are covered:

3 (1) the Plant Operating Manual, (2) Technical Specifications,  
4 (3) plant procedures, and (4) any commitments made in the FSAR.

5 Each operating plant is audited two to three times yearly. Nuclear  
6 fuel activities are audited annually. Additional audits may be  
7 requested by line or corporate management if special problems are  
8 encountered.

9 The Engineering & Construction Unit audits the Power Plant  
10 Engineering Department, the Power Plant Construction Department  
11 (including site activities), the Engineering & Construction Quality  
12 Assurance Section, and those sections of the Technical Services  
13 Department performing nuclear-related activities. Each of these  
14 activities is audited twice a year to assure that they meet Part 1 -  
15 Engineering and Construction of the Corporate Quality Assurance  
16 Audit Program and other criteria specified in the PSAR. Additional  
17 audits may be requested by line or corporate management if special  
18 problems are encountered.

19 The Materials & Code Unit audits the plant construction  
20 site to assure that all requirements of the ASME code to which  
21 we are committed are met. The controlling document for code  
22 compliance is the CP&L ASME QA Manual and other commitments in  
23 the PSAR. In addition, the Engineering & Construction Quality  
24 Assurance Section is audited for code conformance. Both of these  
25 are audited twice yearly. This Unit also interfaces with the Power

1 Plant Engineering and Power Plant Construction Departments to  
2 determine correct code requirements. Additional audits may be  
3 requested by line or corporate management if special problems  
4 are encountered.

5 Q. What reports do each of the above units prepare and how are they  
6 actually utilized to enhance the quality of the Company's nuclear  
7 program?

8 A. Each of the above units prepares an audit report which describes  
9 two categories of items which are termed findings and concerns.  
10 A finding is a nonconformance (violation of criteria, failure to  
11 follow procedures, or failure to follow specifications), while a  
12 concern is an item which may, if not corrected, lead to a finding  
13 in the future. Audit reports are sent to the manager of the  
14 operation audited, the Chairman/Chief Executive Officer of CP&L,  
15 and the Executive Vice President/Chief Operating Officer. Copies  
16 are sent to the latter two with a transmittal memorandum which  
17 provides space for their comment.

18 All findings in the audit report require a response within  
19 30 days as to the corrective action taken to prevent recurrence and a  
20 schedule for implementation of corrective action. A list of  
21 outstanding items is maintained and if items fall behind schedule,  
22 the manager responsible for the item is contacted to reschedule  
23 completion of the item. Similar follow-up action is taken until  
24 the item is completed.

25 In addition, a log of uncompleted items is kept and a report

1 is issued on open findings every month. Copies of the report are  
2 sent monthly to people responsible for corrective action and to  
3 the Executive Vice President/Chief Operating Officer.

4 All findings and concerns are reaudited for corrective action  
5 upon the next scheduled audit.

6 Q. In addition to these formal reports, are there any other ways in  
7 which you report to various levels of management, including senior  
8 management, on quality assurance activities within the Company  
9 and the status of quality assurance in the nuclear program?

10 A. In addition to the above-described formal reports, meetings may  
11 be held with the management of the activity audited if trends are  
12 noticed which would be counter to the Quality Assurance Program.  
13 I discuss such trends and concerns in detail with the management  
14 of the activities audited along with the unit head whose unit  
15 performed the audit and the lead auditor on the subject audit.  
16 Should such meetings with the management of the activity audited  
17 not be satisfactory, then upper line management may be contacted  
18 for a similar review of the problems.

19 As I mentioned earlier, not less than once per quarter I  
20 meet with the Executive Vice President/Chief Operating Officer  
21 to inform him of items not contained in audit reports, including  
22 attitudes toward the program, problems requiring long-term resolution,  
23 and possible future programmatic requirements.

24 Q. How do you view the function of the Corporate Nuclear Safety &  
25 Quality Assurance Audit Section in comparison to the functions

1 of the NRC Office of Inspection and Enforcement?  
2 A. Objectives of NRC Inspection and Enforcement are very similar to the  
3 objectives of the Corporate Nuclear Safety & Quality Assurance Audit  
4 Section. That is, our objective is to ensure that the Company's  
5 nuclear power plants are designed, engineered, constructed, and  
6 operated safely, thus preventing any danger to plant staff or the  
7 general public. We believe that it is incumbent upon CP&L to  
8 discover and correct any deficiencies in our nuclear power program.  
9 NRC Inspection and Enforcement provides redundancy in this effort  
10 and challenges us to put forth our best efforts. We have found  
11 that for the most part the NRC inspectors have been proficient in  
12 their duties and we believe that CP&L has established a creditable  
13 relationship with them.

WRB/wbl

1 MR. JONES: Mr. Chairman, this panel is available  
2 for cross.

3 CHAIRMAN SMITH: Mr. Gordon?

4 MR. GORDON: No questions.

5 CHAIRMAN SMITH: Mr. Reis?

6 CROSS-EXAMINATION

7 BY MR. REIS:

8 Q Mr. McManus, on page 11, starting on line 11,  
9 at the end of that answer you talk about a report being  
10 sent to Harris, Jones and Utley. How do you know they do  
11 anything beside move that report from the in-basket to the  
12 out-basket?

13 A (Witness McManus) There is provision on that  
14 particular report, there is provision for comment by the  
15 Executive Vice President. He signs the report. And he  
16 oftentimes makes comments on it.

17 Q Does Mr. Harris ever make comments on it?

18 A Not on this report. On the Quality Assurance  
19 Audit reports he oftentimes makes comments on that.

20 Q And is that discussed later in your testimony  
21 here?

22 A Yes, it is.

23 Q And that's discussed on page 14, isn't it?

24 A Yes.

25 Q I see.

XXXXXX

WRB/wb2 1

2 Do you ever meet with Mr. Harris on quality  
3 assurance, or on these matters, besides meeting with Mr. Jones?

4 A Not too often. I have met with Mr. Harris  
5 once.

6 Q All right, sir.

7 From Mr. Jones' comments on the reports do you  
8 feel he pays attention to them every month and reads them?

9 A Not only from his comments. Before this present  
10 position I was Manager of Nuclear Engineering. And I can  
11 assure you that those reports excite him to some action.

12 Q All right.

13 Now there's talk of a quarterly meeting, at least  
14 on a quarterly basis, on the top of page 12, with Mr. Jones.

15 Can you tell me something about the structure of  
16 those meetings? Are they with other corporate officers or  
17 managers besides yourself; or is it an individual one-to-one  
18 meeting?

19 A This is a face-to-face meeting with just  
20 Mr. Jones. Sometimes Mr. Morgan attends. And we have complete  
21 freedom to discuss anything we feel like.

22 Q You don't feel inhibited at these meetings?

23 A No, I don't.

24 Q Okay.

25 How long do they last?

A I'd say they average two hours.

WRB/wb3

1 Q And you feel free to raise any of your concerns  
2 about nuclear safety at these meetings?

3 A Nuclear safety or quality assurance audits.

4 Q Now on lines 11 through 14 of that testimony,  
5 there it says you have freedom to communicate anyplace you  
6 want within the organization, it says in essence.

7 Have you ever communicated with Mr. Harris on  
8 any matter of nuclear concern, nuclear safety concern?

9 A I've never found it necessary. I would not hesi-  
10 tate to if I found it necessary.

C6 11 Q In the concluding lines on page 16, starting at  
12 about line 7 to about line 10, really, you talk about  
13 redundancy of inspection and enforcement effort.

14 Whose effort do you think is redundant to whose?  
15 In other words, is CP&L's effort redundant to NRC's, or  
16 is NRC's effort redundant to CP&L's?

17 A Well I would hope they were redundant to each  
18 other.

19 I think Mr. Cantrell mentioned quality assurance  
20 audit reports once, and we certainly look at their reports  
21 very carefully.

22 MR. REIS: Thank you. That's all I have.

23 MR. JONES: Mr. Chairman, I failed to ask a  
24 couple of questions. I think it could be reconstructed from  
25 the statements of professional qualifications, but there may

WRB/wb4 1

2 be some curiosity about Mr. Loflin's role and Mr. Banks'  
3 role on this panel.

4 DR. LEEDS: Mr. Loflin was the predecessor of  
5 Mr. McManus; is that right?

6 MR. JONES: That's correct. And Mr. Banks once  
7 held the corporate QA function when it was a separate  
8 function.

9 EXAMINATION BY THE BOARD

10 BY CHAIRMAN SMITE:

XXXXX

11 Q Mr. McManus, do you have any other duties?

12 A (Witness McManus) I beg your pardon?

13 Q Do you have any other duties for CP&L?

14 A None except corporate nuclear safety and quality  
15 assurance audit.

16 Q I understand that you report occasionally, or  
17 periodically to Mr. Jones. What reporting do you do to  
18 Mr. Morgan?

19 A Mr. Morgan, as Mr. Jones explained, handles  
20 primarily administrative duties. His department has a lot  
21 of sections attached to it that have unique duties at the  
22 corporate level.

23 Q Yes; but what's the nature of your relationship  
24 to Mr. Morgan?

25 A Well he does my performance evaluation and--

Q He evaluates your performance?



WRB/wb5

1 A --in conjunction with Mr. Jones. He approves my  
2 vacation schedule; administrative raises, evaluations of  
3 my employees, he handles.

4 Q And is there any level of control supervision  
5 between you and Mr. Morgan?

6 A Could you be more specific?

7 Q Well, is there any person between you and  
8 Mr. Morgan and/or Mr. Jones, as the case may be?

9 A None.

10 Q And so you are then, from Mr. Harris, Mr. Jones,  
11 Mr. Morgan, fourth in a level from the very top of the  
12 corporation?

13 A Well, as Mr. Jones explained, except in matters  
14 of nuclear safety or quality assurance audit, I go direct  
15 to him.

16 Q But in the ordinary hierarchy of organizational  
17 charts you would be the fourth level from Mr. Harris?

18 A Administratively, that's correct.

19 Q And how would you regard yourself as referred  
20 to in the company: as high management, middle management?

21 That's not a particularly important question  
22 because it doesn't tell us much. I was just wondering  
23 what term would be used.

24 A Maybe you had better ask Mr. Jones that question.

25 (Laughter)

WRB/wb6

1 BY DR. LEEDS:

2 Q Mr. Loflin, Mr. Reis asked Mr. McManus a series  
3 of questions, and I'd sort of like to hear your response to  
4 some of those questions. I'm not going to try to repeat  
5 them all. But how often do you, in your previous position  
6 how often did you see Mr. Jones? --if Mr. Jones was the right  
7 person to see at that time.

8 A (Witness Loflin) I had the same relationship  
9 with Mr. Jones that Mr. McManus has. I reviewed the  
10 record and, during 1976, I had at least six documented  
11 briefings with Mr. Jones in that time period.

12 Q During that one year?

13 A Yes.

14 Q How about Mr. Harris?

15 A I had one session with Mr. Harris when I was first  
16 assigned to the position. And he stressed to me my obliga-  
17 tion to report to him if I had any difficulties.

18 Q That was the purpose of the meeting, to tell you  
19 that?

20 A Yes.

21 Q Did you ever have difficulties?

22 A No.

23 Q None.

24 Where are you physically located in the building,  
25 Mr. McManus?

WRB/wb7

1           A       (Witness McManus) On the ninth floor of the  
2 Center Plaza Building.

3           Q       And where is Mr. Jones located?

4           A       He's located on the thirteenth floor. --the  
5 twelfth floor; I'm sorry.

6           Q       But there's no problem getting in to Mr. Jones  
7 at any time?

8           A       No; I've never had any problem.

9           Q       But you don't just see him ad hoc-ly on a  
10 conversation--

11          A       We're not on the same floor. We don't meet at  
12 the coffee urn. He calls occasionally on the phone on some  
13 specific matter, and I call him occasionally on the phone  
14 for some specific matter, besides meetings.

15          Q       Do you feel this inhibits any communication  
16 lines? Sometimes two or three floors can just block communi-  
17 cation.

18          A       No, sir. His instruction to me is, any problem  
19 I can't handle on a lower level, come to him. And, if he  
20 doesn't satisfy me, go to Mr. Harris. And those were  
21 Mr. Harris' instructions also.

22          Q       So you met with Mr. Harris?

23          A       Yes, sir.

24          Q       How about you, Mr. Banks? Do you have any com-  
25 ments on those kinds of questions?

WRB/wb8

1 A (Witness Banks) No. I would agree the comments  
2 made here; except I go back earlier into history. I actually  
3 set up the corporate quality assurance group in the company.  
4 And a lot of these things were formalized. And they were not  
5 firm documented back at the beginning as they are now.  
6 But I have never had any problem getting in to talk to  
7 Mr. Jones on any basis of quality assurance when I was in  
8 that position. I never was inhibited from seeing Mr. Harris,  
9 and I have talked to him on several occasions about QA as a  
10 program and how it fit into the company.

11 Q Mr. McManus, do you have any concern that  
12 Mr. Morgan reviews your salary in terms of that being a  
13 problem inhibiting you from performing your duties?

14 A (Witness McManus) No, sir.

15 Q Does Mr. Morgan's many sections impinge in any  
16 way on quality assurance activities?

17 A No, none at all.

18 Q So his sections just don't involve nuclear safety  
19 or quality assurance?

20 A That's correct.

21 BY CHAIRMAN SMITH:

22 Q That was my question, the question I tried to  
23 formulate to Mr. Jones.

24 As far as Mr. Morgan's direct interest is con-  
25 cerned, he simply doesn't care how much trouble you might

WRB/wb9

1 cause the operational people, or the construction people?

2 A Well I wouldn't say he wouldn't care how much  
3 trouble I caused them. Justifiably, that's correct. If it's  
4 a justifiable situation and there are problems and I cause  
5 trouble, he has no problem with it.

6 Q But it doesn't affect his fortunes in the corpora-  
7 tion when you do that?

8 A No.

9 BY MR. LEEDS:

10 Q In fact, if you didn't cause trouble it might  
11 affect his fortunes; is that right?

12 A I don't think so. The only thing I've ever  
13 been threatened with was that if I let line management or a  
14 senior vice president intimidate me, Mr. Jones assured me  
15 that that would have a negative effect on my performance  
16 evaluation.

17 BY CHAIRMAN SMITH:

18 Q And you feel that these are more than just  
19 ritualistic expressions? You feel that these people have been  
20 sincere in these statements to you, sir?

21 A I think they're very sincere. If they were not  
22 sincere I don't think I could live in this job.

23 BY DR. LEEDS:

24 Q You have no problems getting compliance within  
25 the company?

WRB/wb10 1

2 A I wouldn't say that. Where we discovered  
3 problems, and where we've been successful in finding out where  
4 the problem are, no, we haven't had any problem.

5 Q Have any of the people, line management or people  
6 like Mr. McDuffie, ever had to come to you to sort of  
7 apply muscle because they couldn't get the problems solved  
8 otherwise?

9 A No, sir. I expect Mr. Jones has told them the  
10 same thing he told me about intimidation. I hope so, anyway.

11 BY CHAIRMAN SMITH:

12 Q I think the point of this question is, Did they  
13 come to you for help?

14 A Yes, upon occasion, some of the line managers,  
15 on new regulations, new quality assurance matters. I can't  
16 get too deeply involved because we must stay removed from  
17 line management. But if they say it would just cause  
18 another problem if we did it this way, I don't mind answering  
19 that question, or some of my people.

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BY DR. LEEDS:

Q I guess I was not thinking of assistance in that sense. I was thinking of they couldn't get problems solved in their own house, and so they came to you to see if they could get you to apply some extra effort that would solve some problems.

A Yes, that's happened.

Q That's happened.

Was it successful?

A I think so.

Q You've sat here quite a few days, and I've observed that you've been here a few days.

A Yes, sir.

Q And you've heard us discuss problems like HPCI doors and RCICs and all the other neat things.

A I was hoping you wouldn't say that, but go ahead.

Q Those neat acronyms.

What I want to know is how do you fit into that, into that kind of a problem where perhaps some people might say they were slow to act?

A Well, for instance, on the HPCI doors -- can I address that one?

Q Please. I'd like for you to address it.

A As soon as I came over to Nuclear Safety, I think Mr. Cantrell had first reported the HPCI door was open.

WRB/mpb2

1 That problem arose. We talked to the plant people. We were  
2 assured that administrative controls would be placed, and  
3 we hoped they would be successful.

4 When it was not, they did commit to include this  
5 in the fire protection plan and to eventually alarm these  
6 doors, and we thought that action was sufficient. We had  
7 no problems with that.

8 Q How about the speed with which they fixed them?

9 A The speed control --

10 Q No, not speed control. The speed with which they  
11 fixed them, put in the alarms and so forth, between the  
12 time they decided to put them in and the time they actually  
13 went into place?

14 A I have no real problem with that. They did  
15 have to wait until shutdown, we did assure ourselves of that.  
16 And they were running the conduit, they had to go through  
17 the secondary containment. They could only do that during  
18 shutdown. We didn't think the problem was serious enough  
19 in the intervening time to say Shut the plant down and do  
20 this modification.

21 Q But you were aware of that problem?

22 A Yes, sir.

23 Q How about Mr. McDuffie's construction type  
24 quality assurance? Are you satisfied with that program?

25 A We have some problems with it occasionally, yes.



WRB/mpb3

1 But basically, yes, we're very satisfied with it.

2 Q You have some problems with it. What problems?

3 A We audit them and we find discrepancies occas-  
4 ionally.

5 Q Okay.

6 After you write an audit report, do you send it  
7 to the NRC?

8 A No, sir.

9 I believe the inspectors review these at the  
10 plant on operating plants. Where we do an audit of operat-  
11 ing plants or the construction site, copies go there, and  
12 when they inspect, I think they look those up.

13 Q Okay.

14 So you're audited by the I&E Region II?

15 A sir?

16 Q You're audited by I&E of Region II?

17 A Yes, we are.

18 CHAIRMAN SMITH: Are there any final questions  
19 of this panel?

20 MR. ERWIN: One question of Mr. McManus.

21 Isn't it true that Mr. Harris is the president  
22 of the United States Chamber of Commerce and spends approx-  
23 imately -- according to the press -- six months of his time  
24 in that job?

25 WITNESS MC MANUS: I can't verify how much of his

WRB/mpb4

1 time he spends on that job, but he is the president of the  
2 Chamber, yes, chairman of the Chamber, yes.

3 MR. ERWIN: Thank you.

4 CHAIRMAN SMITH: Now we have --

5 BY DR. LEEDS:

6 Q Do you have telephone access to him by calling  
7 long distance? You have no problem with that, do you?

8 A (Witness McManus) I never have. If I call his  
9 office I'm sure his administrative assistant or his secretary  
10 could give me a phone number.

11 CHAIRMAN SMITH: Mr. Reis, you were going to  
12 explain for the record Mr. Cantrell's participation at  
13 counsel table.

14 MR. REIS: Yes.

15 Mr. Cantrell gave me some questions which I asked,  
16 and he has informed me that I've asked all the questions  
17 that he feels need asking. Some questions we agreed that  
18 they had been asked and they had been covered. And he has  
19 informed me that he has no further questions of any of the  
20 CP&L witnesses.

21 CHAIRMAN SMITH: Okay.

22 Then we still have with us Messers. Long, Dance,  
23 Murphy, and Minor.

24 Gentlemen, is there anything remaining that  
25 you want to bring to the attention of the Board?

WRB/mpb5

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MR. MURPEY: I can think of nothing, sir.

CHAIRMAN SMITH: Mr. Minor is shaking his head  
no.

Mr. Dance might have a point here.

Mr. Long, while he's getting prepared, is there  
anything you want to bring to our attention?

MR. LONG: No, sir.

MR. ERWIN: Mr. Chairman, Mr. Eddleman has a  
correction or two to his testimony.

CHAIRMAN SMITH: To his testimony?

MR. EDDLEMAN: To the transcript.

MR. ERWIN: Would this be an appropriate time?

CHAIRMAN SMITH: Do it in writing. Okay?

MR. EDDLEMAN: Fine.

MR. REIS: One other matter that Mr. Dance walked  
up and told me. It was a survey of the two employees  
between Board Exhibit 8 and the survey conducted as referenced  
in Attachment 8 to Panel III.

We have telephoned those people and contacted  
them by phone to find out. And we will submit something  
in writing from them. But by phone they say they have no  
concern. They would have answered these questions  
essentially that they did inspect those plants. But they  
have no concerns with the management capability of the  
quality assurance program of CP&L.

WRB/mpb6

1 CHAIRMAN SMITH: Then the general message of  
2 Mr. Long's original memorandum was discussed with these two?

3 MR. REIS: Yes, they specifically answered the  
4 questions. And I think Mr. Dance told me they answered the  
5 questions, the five questions in the order of yes, yes, no,  
6 no, no.

7 CHAIRMAN SMITH: All right.

8 Now I'm satisfied with that.

9 But does any party wish to have the record  
10 augmented with a written response?

11 Mr. Erwin?

12 MR. ERWIN: No.

13 CHAIRMAN SMITH: All right.

14 Then I think you can be relieved of any further  
15 responsibility along that line.

16 Now we have come to the -- Do you have something,  
17 Mr. Trowbridge?

18 MR. TROWBRIDGE: Well, I did want to say, Mr.  
19 Chairman, that it had been our plan, had the hearing gone on  
20 tomorrow, and if time had permitted tomorrow, to put on a  
21 live witness to respond to Mr. Eddleman's limited appearance.  
22 That's no longer possible.

23 What we propose to do instead, which is what  
24 happens in most of the cases of limited appearances, is to  
25 provide comments in writing on the items in the limited

WRB/mpb7

1 appearance which are addressed to us or could be addressed  
2 by us, and to provide copies of our response to all parties  
3 and to Mr. Eddleman, and to the Board.

4 CHAIRMAN SMITH: That is a more traditional  
5 approach too.

6 MR. REIS: The Staff intends to do the same thing.

7 CHAIRMAN SMITH: Okay.

8 Then, finally, Mr. Eddleman, by my observation,  
9 has been a faithful attendant at these proceedings. I've  
10 seen him frequently confer with Mr. Erwin, and in fact,  
11 members of the Staff.

12 Mr. Eddleman, do you feel that you have had a  
13 productive participation in this proceeding?

14 MR. EDDLEMAN: Within the limits that are placed  
15 by having to go through counsel, yes, sir.

16 CHAIRMAN SMITH: Okay.

17 I think that just about does it.

18 Now we can discuss proposed findings.

19 MR. TROWBRIDGE: May I address that, Mr. Chairman?

20 The Rules of Practice do provide that in the  
21 absence of other directions from the Board that we would  
22 file proposed findings in 20 days, Intervenor in 30 days,  
23 and the Staff in 40 days, and that we will then have a  
24 further option, a ten day opportunity to comment on or  
25 respond to the filings by other parties.

WRB/mpb8 1 I'm going to suggest in this case a different  
2 schedule, and I hope the Board will direct a different  
3 schedule.

4 I'm going to suggest that all parties be permitted  
5 the 40 days in which to file proposed findings, and that ten  
6 days thereafter be allowed optionally to give for comments  
7 on the filings of other parties. This is a lengthy record  
8 unlike other proceedings where applicants file more promptly.  
9 The record is usually largely of the applicant's making.

10 In this particular case the record is largely  
11 of the Staff's making and a great deal of it consists of  
12 not prepared testimony, but additional testimony, responses  
13 to questions by other parties and the Board. Also, this is  
14 a somewhat unique proceeding, as illustrated by the fact that  
15 the Staff went first with its testimony, in that the central  
16 point or the relocation for this hearing started with Staff  
17 testimony. And while we do not dispute in any way the  
18 Staff position that we have the burden of proof on manage-  
19 ment capability of CP&L, nevertheless we would suggest that  
20 we be allowed that period of time in which to file.

21 CHAIRMAN SMITH: Mr. Reis?

22 MR. REIS: I have no objection to allowing the  
23 Applicant some additional time over the 20 days to file.  
24 But I would like, since they do have the burden of proof,  
25 to see what they file and file at a time subsequent to their

WRB/mpb9

1 filing.

2 Normally the Rules provide us with another 20  
3 days to prepare after we see what the burden comes  
4 forward with, and another ten days after, the Intervenor.  
5 We would certainly appreciate that in this case.

6 MR. TROWBRIDGE: Mr. Chairman, if the Board is  
7 inclined to give the Staff additional time, and we get 40  
8 days, obviously I'm not going to object. But I do point out  
9 that under my proposal the Staff would have had an opportunity  
10 not provided for under the present Rules, to reply within ten  
11 days to anything we file.

12 CHAIRMAN SMITH: I think we can probably satisfy  
13 everyone's needs.

14 At the close of this evidentiary record here  
15 we see no reason why a decision on this remand is urgently  
16 required. I think that the better response is one that  
17 provides the complete opportunity for well-reasoned proposed  
18 findings and conclusions of law.

19 And so, Mr. Trowbridge, we will give you the  
20 time you want. But then we will go back to the traditional  
21 extra time for the Staff, because I see no reason to depart  
22 from it. It's a good procedure.

23 MR. ERWIN: Mr. Chairman, will the schedule, then,  
24 be 40, 10, and 10? That's reasonable with us.

25 CHAIRMAN SMITH: 40, 10, and 10; plus the

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1 possibility of --

2 MR. ERWIN: That's a lengthy time. But if they  
3 want the 40 days, we're not about to object.

4 But I would like to keep the traditional order  
5 myself.

6 CHAIRMAN SMITH: Well, of course, this approach  
7 would have ended up the same.

8 DR. LEEDS: The Board has discussed also the  
9 possibility of sending you all a letter within a week or so  
10 where we might have some suggestions on things we would  
11 like discussed specifically so that we don't miss those  
12 topics also. I don't think the nature of that would stop  
13 you from starting the preparation. These might be addit-  
14 tional items that you might not normally include in your  
15 conclusions of law.

16 CHAIRMAN SMITH: You seem to remain troubled,  
17 Mr. Trowbridge. I thought we had given you exactly what  
18 you wanted here.

19 MR. TROWBRIDGE: You did give me exactly what  
20 I wanted, Mr. Chairman.

21 Mr. Jones and I have had some discussion of  
22 schedule.

23 CHAIRMAN SMITH: While they are discussing,  
24 there is one bit of unfinished business, and that is the  
25 Board was going to take official notice of the charts in



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1 NUREG 0366.

2 MR. REIS: Mr. Chairman, in the interim may the  
3 gentlemen at the table step down?

4 CHAIRMAN SMITH: Oh, yes. They're excused.

5 (The panel excused.)

6 end 3B  
7 Cass 1

8 CHAIRMAN SMITH: The Board will take official  
9 notice and forward to all parties the Draft 77 Draft Table  
10 4.1 BWR Plant Versus System, and the same chart except  
11 I think it is Table 4.2, but it is obliterated, which is  
12 PWR Plant Versus System, and that's from the Draft 77 of  
13 NUREG 0366, and the same two charts, 4.1 and 4.2, for  
14 NUREG 0366 for 1966.

15 There was one remaining exhibit identified by  
16 not received in evidence. We never did receive the Board  
17 notification in evidence, and I think it is just as well  
18 to leave it that way, although it doesn't matter.

19 If anybody has a preference one way or another,  
20 it is clear that it cannot be the basis for a finding of fact  
21 or conclusion of law. The only purpose of it would be to  
22 demonstrate the extent of inquiry.

23 So let's just leave it the way it is.

24 Mr. Trowbridge?

25 MR. TROWBRIDGE: Mr. Chairman, did I miss the  
Board's precise ruling on the time table for filing?

CHAIRMAN SMITH: Well, we allowed the Applicant

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40 days, and then 10 and 10 for the Intervenors and the Staff.

2 After the 40 days, the rule goes back into --

3 MR. TROWBRIDGE: I understand.

4 CHAIRMAN SMITH: Plus your tail-end date.

5 MR. TROWBRIDGE: Thank you.

6 CHAIRMAN SMITH: Now, one last comment about  
7 proposed findings.

8 Proposed findings -- I hesitate to tell gentlemen  
9 of such great experience and eminence as we have here, but  
10 proposed findings which do not present a balanced picture --  
11 and I use for example my comments upon the cross-examination  
12 on the HPCI door -- proposed findings that don't present a  
13 balanced picture don't serve a great use to the Board.

14 You can get a proposed finding -- as a practical  
15 matter you can get a proposed finding adopted much better if  
16 it is the type of proposed finding the Board is likely to  
17 write.

18 MR. TROWBRIDGE: I think I've been aware of that  
19 for some time, Mr. Chairman.

20 DR. LEEDS: Also just from personal experience,  
21 sometimes proposed findings get to be a very long thing, and  
22 those don't help me very much.

23 MR. TROWBRIDGE: No.

24 Actually what I had meant to say in asking for  
25 40 days, actually we'll be able to produce a more succinct

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set of findings with more citations in a shorter period.

2

CHAIRMAN SMITH: And I hope a balanced.

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MR. TROWBRIDGE: And balanced.

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CHAIRMAN SMITH: Anything further, gentlemen?

5

(No response.)

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CHAIRMAN SMITH: Thank you very much.

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The hearing is adjourned. Thank you.

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(Whereupon, at 5:40 p.m., the hearing in the

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above-entitled matter was adjourned.)

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