ORIGINAL

UNITED STATES
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:	DOCKET NO:
SHEARON HARRIS NUCLEAR	50-400-OL
POWER PLANT	50-401-OL

LOCATION: RALEIGH, N. C.

PAGES: 3186-3384

DATE: September 11, 1984

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the matter of:	:	
CAROLINA POWER AND LIGHT COMPANY and NORTH CAROLINA EASTERN MUNICIPAL POWER AGENCY	:	Docket Nos. 50-400 OL 50-401
Shearon Harris Nuclear Power Plant Units 1 and 2	:	

Raleigh Civic Center,
500 Fayetteville Street Mall,
Raleigh, North Carolina.

Tuesday, 11 September 1984.

The hearing in the above-entitled matter was reconvened, pursuant to adjournment, at 9:00 a.m.

BEFORE:

JAMES L. KELLEY, Esq., Chairman,
Atomic Safety and Licensing Board.

DR. JAMES H. CARPENTER, Member.

DR. GLENN O. BRIGHT, Member.

APPEARANCES:

(As heretofore noted.)

C O N T E N T S

Witness	Direct	Cross	Board	Redirect	Recross
Charles R. Deitz) Patrick W. Howe)		3197	3370		

Exhibit	Identified	Received	Withdrawn
JI 16	3295	3295	
JI 23	3349		
JI 24	3248	3248	
JI 25	3248	3248	
JI 26			3248
JI 27	3248	3248	
JI 28	3264	3264	
JI 29	3316	3325	

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#1

P R O C E E D I N G S

JUDGE KELLEY: Back on the record.

Whereupon.

C. R. DIETZ,

and

P. W. HOWE

resumed the stand and, having been previously duly sworn, were examined and testified further as follows:

MR. ROACH: Mr. Chairman, as I'm sure the panel knows, Hurricane Diana is moving up the Atlantic Coast this morning. There's a hurricane warning now in effect on the North Carolina coast. These witnesses, Mr. Howe and Mr. Dietz, are the Vice-President in charge of the Brunswick plant and the plant General Manager. They, at this moment are concerned about what possible effect the hurricane might have at the plant as the hurricane gets closer. If the hurricane, in fact. does get closer to the plant, Mr. Dietz has to return to the plant.

Both Mr. Howe and Mr. Dietz also reside in the Brunswick area and are concerned about the safety of their family with the hurricane in the position it's now in.

We're in contact with the weather bureau now as to the progress of the hurricane. If the need arises we may have to ask that this panel be dismissed or recessed and move to the Harris panel and bring these gentlemen back

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after the hurricane has subsided. It's something we are concerned about and the witnesses are concerned about as well. And we want to make sure the Board understands that.

JUDGE KELLEY: What are our options on moving to the Harris panel.

MR. ROACH: They will be available.

JUDGE KELLEY: Let me ask Mr. Runkle whether he is ready to make such a switch.

MR. RUNKLE: That would be a little difficult at this time. If we were going to do a complete shift I would need about two hours.

JUDGE KELLEY: I certainly understand your concern. I think the Board will not want to be the ones to keep you back. If you want to go now, maybe you had better go. That's a judgment for you to make.

MR. DIETZ: I don't think it is necessary to leave now. We're tracking the storm and it's indicated by the forecast this morning it's still off the coast and there is no imminent danger. I just -- we at the plant site have been preparing for the fact that it's escalated since this weekend. And we're well prepared.

I don't think there's an imminent danger but I think the responsibility would indicate a need to be in proximity to the plant should the storm actually become rampant.

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JUDGE KELLEY: I'm sure it's a point in which the Board does not have to confer. I'll just tell you at the time you make a judgment you should leave, you should leave. And go ahead and we'll be flexible. We'll take a break if we need to do that. But that is certainly something that we recognize is something that has to be done.

We have one procedural matter -- actually some rulings that we can make this morning. We have pending before us requests for subpoenas for certain named individuals to be brought in as witnesses on Mr. Eddleman's contentions, number 41 and 65. And we heard argument on those issues last week and we subsequently received from Mr. Eddlemen at our request a priority list rank ordering the people that he wants subpoenas to issue for.

We have our rulings this morning on Contention 65 which has to do with the integrity of concrete. And I think we'll probably have the ones on 41 relating to welding tomorrow. But as long as we have got 65 this morning, let's go ahead and get that far.

Our bottom line -- there are eight names on Mr. Eddleman's priority list and I would just read them. I'm not sure if they're in the record yet. But the priority list reads as follows: Breedlove, Mountcastle, Troxel, French, Woltz, Sealev, and Smith.

We are going to grant the request for subpoenas

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with respect to five of those eight people. That's the ruling itself. Now, let me give our reasons for it and particularize the ruling a little more fully.

The discussion of the issue among Counsel began with a discussion of our authority to limit the witnesses on the ground that their testimony was likely to be cumulative. That was the essential thrust of the Applicant's opposition to the request.

Mr. Eddleman made the argument that we are obligated to issue subpoenas upon showing a general relevance and then can only deny them on the ground they're unreasonable, unreasonable being a concept found in the subsection on motions to quash.

We think that's too narrow a reading of our authority. The Applicant's directed us to 10 CFR 2 757A which explicitly states that Boards have this authority and I'm quoting, "To prevent unnecessary delays or an unnecessarily large record the Presiding Officer may limit the number of witnesses whose testimony may be cumulative."

It seems to us that that allows us to make judgments in advance on any question of whether testimony will be cumulative. Having said that though, there's a practical problem that often arises and that is that we, in advance of hearing may not be in a position to make any very

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firm judgment about whether testimony will be cumulative or not.

And it's certainly a determination that is very largely discretionary on the Board's part.

In this particular context and apart from abstract legal considerations, we have a contention that's essentially a QA contention. The Intervenors want to ask questions about particular pour packages. Mr. Eddleman put that rather well we thought. At transcript 2404 to 2405, I would just read this again. This is Mr. Eddleman talking, and I'm quoting.

"There are things that are wrong with the reports that these people signed or things that certainly appear to be wrong. And one of the things we want to know is, well, why did you sign that report. Did you notice that this number appeared to be wrong. Did you notice that this thing was a problem. I want to know from the person whose signature appears there, not from someone who is placed higher up or the general manager of the project or a civil engineer with Ebasco how this happened.

"I think that is directly relevant.

"We think in the context of this contention that such questions might very well be relevant and not cumulative."

So that's our basic reason why we are going to allow these subpoenas. It just seems to us that QA is a

WRB/Pp6

process that is really quite a complicated process. It involves typically a lot of people with different jobs. It's often said that inspectors, QA inspectors don't have any inspectors, they're just supposed to use slide rules and measurements and make a mechanical determination. But the fact is that even a person whose job is most hedged about with procedural restrictions has some discretion, some judgment. And that can become important in a QA context.

Partly for these same reasons, we are reluctant in this kind of a controversy, again a QA controversy is what we mean, to in effect grant to one side, in this case the Applicants, a monopoly on choosing the witnesses

The Intervenors do have a direct case to put on. We think they should be entitled to pick some of the people who are going to appear on the stand.

We're also taking into account certain practical considerations. Mr Eddleman, after all, did not seek a great number of subpoenas, 30 or 40 or 50. He's asking for 8 subpoenas and he's in turn given us a priority list among those people.

Beyond that we don't expect, given the nature of the questioning that Mr. Eddleman has indicated, we don't expect that these witnesses would be on the stand for long periods of time. Again, we can quote Mr. Eddleman from transcript 2406, where he says as follows:

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"I don't propose to keep most of these people on the stand for a long time. Most of them, they are very simple questions that can be asked and gotten into the record. But I think direct evidence is necessary."

So we are relying in part on Mr. Eddleman's representation that these witnesses will be in the main, asked specific questions about limited areas and not be on the stand a long time.

We are going to grant these subpoenas on a condition, one that we talked about earlier, but that we will make explicit in connection with this ruling.

Mr. Eddleman is to provide an outline of the general areas in which he plans to ask questions of each witness. And he's is also to reference specifically any particular pour package that he intends to use as a basis for questioning. The intention here, obviously, is to allow the Applicant to prepare and to allow the witness to look over documents in advance so that he can search his memory and be prepared to respond to questions. This outline that we're requiring is in the nature of a substitute for prefile testimony. It serves essentially the same function.

We are not requiring that specific questions be set forth. That too, was mentioned earlier and we'll just make that clear again.

As to time, the hearing on these safety issues is

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presently scheduled to begin on the 10th of October. If I say the 1st of October, it will certainly be a Sunday. I don't know what day it is. Anybody got a calendar?

It's a Monday? Well, we'll say October 1st, 10-1-84, to have in the hands of Counsel for the Applicants these outlines so that they've got close to two weeks to review what's coming up.

MR. BARTH: I assume that will include the Staff?

JUDGE KELLEY: Yes, sir. Right.

Now, as to particular people, we're granting a request for subpoena for Mr. Breedlove, Mr. Strickland. Mr. French, Ms. Woltz, and Mr. Sealey.

Mr. Sealey and Mr. Smith, we were told by the Applicant without any contradiction by Mr. Eddleman do essentially the same thing. We're denying the request as to Mr. Smith.

Mr. Mountcastle and Mr. Troxel, who are the other two names are no longer employees with CP&L. Let me reconfirm, isn't that the case, Mr. Baxter?

MR. BAXTER: That's right. Mr. Troxel was a Daniel employee but neither are employed by CP&L right now.

JUDGE KELLEY: Can we determine where they are. I don't remember.

MR. BAXTER: You asked me to look into whether or not we had last known their directions. And we do.

They're all listed as somewhere in North Carolina.

JUDGE KELLEY: But they are both terminated as far as CP&L and Shearon Harris are concerned?

MR. BAXTER: That's right.

JUDGE KELLEY. Our ruling with regard to those two is that we are not going to grant the request for subpoenas, they don't work for CP&L.

It seems to us that given the description of their functions, there are overlaps and there's the further complication that if we granted the subpoena -- I'll have further to say on that in a moment. We would have to enforce that.

We are not going to bar their being brought in. If Mr. Eddleman can find these individuals and they want to come in, subject to the possibility they may be objected to on grounds of cumulative testimony, then that's their affair and we would allow that.

But a subpoena request for an unwilling witness who doesn't work for the Applicant and the Staff, is a rather large procedural hurdle that involves -- I've never done it -- it involves, I understand, going to the U. S. Attorney and getting court orders and all the rest. And if these people appear to be unique and crucial, we might very well do that.

But they don't appear to be in that category so

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it's up to Mr. Eddleman to secure their voluntary attendance if he wishes to do so.

And one other point should be mentioned. It may well be when these witnesses show up on the stand, as we hear their testimony unfold in the context of the case, that it'll become cumulative at some point. And our ruling now is not -- is without prejudice to the right of Applicant's or Staff to, at that point, move that the questioning terminate on the ground that it's cumulative and that will be an open possibility and we'll rule on it in the light of the way things will develop at that point.

So those are our rulings on 65 and our reasons and some conditions that pertain to the rulings. Let me ask Mr. Baxter, in light of the Board's determination that Mr. Eddleman should be entitled to call these people who are employees of CP&L, whether it will be necessary for the board to issue subpoenas, or whether you would produce them. Or do you want to think about that.

MR. BAXTER: Well, I haven't actually considered that, Mr. Chairman. I would like some time to consult about that. I would request that the Board not issue those immediately. It may be possible for the parties at least to work out the timing of the appearance of the witnesses.

JUDGE KELLEY: I don't see any need to issue

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them immediately or even tomorrow. I would think you could talk with Mr Eddleman and consult with your own people. If you could get back to us by the end of the week with a status report anyway, I think that would be sufficient.

MR. RUNKLE: Mr. Eddleman had expressed being able to negotiate, you know, appearance times and that kind of thing to facilitate in any way possible the appearances of these witnesses. I don't think that's going to be a problem though.

JUDGE KELLEY: Thank you. Okay. Well, the Board has ruled in the record and it is up now to Counsel for the Applicants and Mr. Eddleman to work out the details. And he'll be coming back to us.

I believe with that we can resume our cross examination.

CROSS EXAMINATION (Resumed)

BY MR. RUNKLE:

Q Good morning, gentlemen.

Mr. Howe, in your prefiled testimony, you stated that you were manager of CP&L's Special Services Department from February '75 to December '76.

What were your responsibilities at that time?

A (Witness Howe) In 1975, the Special Services Department included nuclear licensing, environmental technology, lands, an organization called Siting, engineering

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computer function, the method shops, large transformer assembly, general office garage, technical and research services, technical library.

That is, to the best of my recollection, and recognizing that was some nine years ago.

Q And then in December '76, you became Vice-President for Technical Services Department. What were your responsibilities at that time?

A Initially they were pretty much the same as formerly existed under the Special Services Department. It was just a change of nomenclature. We subsequently underwent some reorganizations and, as I recall at that time to the best of my recollection, we had licensing and permitting. We had siting, environmental technology, lands, and I believe it was along about that time that we had engineering and construction.

Although I'm not sure, Mr. Runkle.

Q And you held that position for around six years, did you not?

A Yes. I was reassigned to the Brunswick nuclear project in September of 1982 as the Vice-President Brunswick Nuclear Project.

Q As Vice-President of Technical Services Department, what was your involvement with the Brunswick nuclear project?

A We provided licensing support, interfacing with

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WRB fls.

with the Nuclear Regulatory Commission. We provided environmental monitoring programs primarily and the controversy surrounding the need to construct or not to construct the cooling towers.

End #1

Q And what was your involvement with the Shearon Harris nuclear power plant at this time?

B-2

A I provided nuclear licensing support, permitting and performed the environmental analysis of the site in preparation of the environmental impact statement. I can't remember at what point engineering and construction became part of tech services. I don't remember the exact date but it was during that timeframe sometime. In that period I also had the engineering and construction quality assurance program assigned to technical services.

WRB2/eb1

Q ANd when you left that position to become vice president for the Brunswick Nuclear Project, was that part of the overall reorganization of the CP&L management?

A Yes.

Q So around that time in September of 1982, many different areas of management were pretty much in flux?

A I left Raleigh and went to Southport, and another gentleman took my place as head of Technical Services.

Q Mr. Dietz, you are not licensed as an SRO at Brunswick, are you?

A (Witness Dietz) No, that's correct, I am not licensed as an SRO at Brunswick.

Q But you have been licensed as an SRO at other plants, have you not?

A That's correct.

Q In your employment at GE which, in your prefiled testimony, was from 1968 to early 1981, what involvement did you have at the Brunswick Nuclear Power Plant?

A I was involved with the startup of Brunswick Unit 2 and was assigned to that facility from the period 1974 until 1976. During that period I was assigned as General Electric Operations Manager, and in that capacity was responsible for direct supervision of management control of our startup test operations organization, including startup test engineering and test design and analysis.

WRB/eb2

In that capacity it was the function of General Electric to provide technical direction to the utility in the startup of the Brunswick facility.

Q At this time did you also assist in the preparation of the tech specs for the Brunswick plant?

A No, we did not.

Q Did GE design the Brunswick plant?

A GE functioned as the nuclear steam supply vendor. By that we provided the reactor vessel fuel, associated emergency core cooling system, equipment and attendant instrumentation.

We were not responsible for the integrated design of the Brunswick facility.

Q And in your position, did you work closely with the CP&L management of the Brunswick startup?

A Yes, sir.

Q What time in 1981, Mr. Dietz, did you join CP&L as the plant general manager of the Brunswick plant?

A I joined Carolina Power and Light Company as general manager of Brunswick station in January of 1981.

Q And you have been there since?

A That's correct.

Q Gentlemen, on page 3 of your prefiled testimony and elsewhere in your testimony you speak of the philosophy of your management of the Brunswick Power Plant. You speak

WRB/eb3

in terms of, oh, in Question 3 where you concentrate on CP&L's capability to operate the Brunswick plant safely, efficiently, and in compliance with regulations, do you not?

A That's correct.

A (Witness Howe) Yes.

Q What are some of the criteria which you would measure safely operating the Brunswick plant?

A (Witness Dietz) Who would you like to answer?

Q Either one of the panel.

A (Witness Howe) I think there are a number of indexes one can use with respect to safety. I think safety is both, in definitions for nuclear safety, a freedom from incidences that would jeopardize or compromise public health and safety, and there's industrial safety, in which we've had a substantial improvement at Brunswick.

I think as far as compliance with the regulations, a dimunition of NRC violations, a dimunition in licensee event reports substantiate that we are moving in a very positive direction in operating in compliance with the requirements of the Nuclear Regulatory Commission. I think these can be used as an index of performance internally within CP&L to judge the progress we're making at Brunswick.

Q And when you speak of incidents, that would include a broad range of --

A I am speaking primarily of NRC violations.

WRB/eb4

Q So you could review any one of the SALP reports, and would that assist you in determining if you had operated safely during that year?

A I think you could draw certain inferences from the SALP report but I think the SALP report covers a number of areas that would go beyond the safety itself. I think it, along with other pieces of data, can be used to constitute a mosaic by which you can get a feeling of the adequacy of your program.

Q ANd when you talk about efficiently operating the Brunswick plant, do you have criteria for measuring "efficiently"?

A I think here again there are a number of indexes that you could utilize in that: budget, schedule, general performance of the plant, staffing levels. Such indexes as these could all be used. Again there is no single number to which one can look and measure precisely efficiency or safety. It's a composite that you look at and from that composite you draw certain conclusions.

Q So, Mr. Howe, who in CP&L upper management evaluates your performance?

A Mr. E. E. Utley, the executive vice president, Power Supply Engineering and Construction.

Q Does he do this in written form or verbally?

A He does this verbally, and on a continuing basis.

WRB/eb5

Q Do you sit down formally to review your performance?

A We have an annual formal review. However, that merely is sort of a reiteration and a summation of the interfacing that goes on virtually on a daily basis between Mr. Utley and myself. I feel that at all times he keeps me well informed as to his opinion of my performance, and on an annual basis we summarize this and discuss strengths and weaknesses.

Q And would he consider some of these indexes that you stated for safety and efficiency?

A Yes.

Q And in your discussions with him you would discuss incidents, industrial safety, compliance with regulations, and the sort, would you not?

A Yes.

Q Would you also discuss the power output of the nuclear power plant?

A Within the proper context, yes.

Q And that would also be the capacity in a year's time of the power plants?

A Yes.

Q Sir, in your opinion, has the capacity of the Brunswick power plants been adequate?

A Well, for 1984, Unit 1, which has been on the line, has exceeded an 83 percent capacity factor year to

WRB/eb6

date which is substantially above industry average.

If you are, however, alluding to its past capacity factors, I would say that on its lifetime capacity factor, it is less than what we would desire. However, I think the improvements that we are making and are continuing to make are demonstrating themselves in the substantially improved capacity factors which we continue to sustain.

We have-- For example, in July Unit 1 operated at a 96.42 capacity factor with 100 percent availability. So I think that there have been factors in the past which were disappointing. I do think, however, that that is past history, that looking at our present performance at Brunswick, you will see that it is amongst the best in the nation.

Q Could you place before you what has been previously identified as JI-27, and distributed to the parties?

A Could you tell me what that is? I do not have the same numbering system, apparently.

Q It is a one-page sheet that says "Capacity Factors of the Brunswick and Robinson Reactors."

MR. ROACH: Your Honor, this is the same document I objected to on several occasions yesterday. I continue to object to the document. I have capacity factors for these three plants which I will be glad to supply to the Board, but I think the document itself remains objectionable.

Would it help if I put the capacity factors I

WRB/eb7

have into the record at this point? They are based on maximum dependable capacity of the plants, and they are generally two or three points higher than what is shown on this sheet.

JUDGE KELLEY: I thought when this came up yesterday-- I remember you were going to come back and say what you thought was wrong with this document.

MR. ROACH: Yes, sir. What is wrong with this document is it is based on design electrical ratings for the reactors and not their maximum dependable capacity which is I think the conventional method of determining capacity factors.

The MDC ratings for the three plants-- The two Brunswick plants should be 790 rather than 821, and the Robinson is 665 rather than 707. Each of the capacity factors to the right changes by two to three percentage points.

I have the correct numbers if you would like them.

JUDGE KELLEY: We have Joint Intervenors Exhibit offered and I believe we said well, we will abide the event on letting in this document. Now you have a separate document. Let me ask both of you gentlemen whether it will-- We are either going to end up with two exhibits, or we are going to end up with one that everybody agrees on.

I don't know if you could make one between the two of you, or whether it is worth trying to do.

MR. ROACH: Yes, sir. We have witnesses on the

WRB/eb8

stand to deal with these numbers. There is not a sponsor for Mr. Runkle's numbers. Mr. Komanoff is not here, and I'm not sure he's available. I don't see how Mr. Runkle intends to substantiate these numbers. I don't believe these witnesses can do that.

MR. RUNKLE: I think the numbers speak for themselves. There is a formula how to determine the capacity factors on this basis. This exhibit was not prepared to, you know, argue the fine points of capacity, just to point out primarily, you know, the lifetime.

I would be glad to adopt the figures of CP&L on this and, as long as it's, you know, determined on maximum dependable capacity in the record, that's fine.

JUDGE KELLEY: Why don't you, as the next step, distribute what you've got-- Okay? -- to the Board and the parties.

MR. ROACH: I have one copy. I have just taken his copy and marked it to correct it. I will be glad to have a copy made.

JUDGE KELLEY: Could you do that?

MR. ROACH: Yes, sir.

MR. BARTH: Your Honor, may the Staff voice its views on this, and then this can proceed, probably more rapidly?

In our view we object to either document. In our

WRB/eb9

view,--

JUDGE KELLEY: I'm sorry, you object to both or neither?

MR. BARTH: Both.

In our view capacity factors on these plants are not related to the contention which is the ability of Carolina Power and Light safely to operate this plant within the NRC regulations with due regard for public health and safety.

We had a long discussion yesterday, and in our view capacity factors are not as such related to the ability of these people and their technical competency to operate the Harris plant, so our objection is to both documents, your Honor.

Thank you.

MR. ROACH: I agree with Mr. Barth.

JUDGE KELLEY: Well, I think the Board started with that point yesterday. I think we were particularly concerned with detailed, in-depth questioning on something that we thought was marginal at best. But we are just looking at this this morning as a first preliminary thing, really.

I would think at the least we should get straight what it is we are talking about. I am going to rule on your objection right now.

Can you make a copy of that here, or does that have to be sent out to the copy center?

WRB/eb10

MR. ROACH: If Mr. Runkle's only concern is with lifetime capacity factors, there are only three numbers and I can give those out.

JUDGE KELLEY: And people can mark up their copies of Mr. Runkle's Exhibit?

MR. ROACH: Yes, your Honor.

JUDGE KELLEY: Okay, let's do that.

MR. ROACH: The second column is "Reactor Manufacturer MW." The maximum dependable capacity as I said for Brunswick 1 and 2 is 790 rather than 821. And for Robinson it is 665 rather than 707.

The numbers in the '82 column and '83 column are not correct then, but I assume Mr. Runkle wants only tne third column corrected.

MR. RUNKLE: There are only nine of them. You might as well just read them all.

MR. ROACH: Okay.

1982, 41 should be 42.2.

26-- I'm going down the column.

JUDGE KELLEY: Okay.

WITNESS HOWE: Excuse me, sir. We don't have a copy of that document.

JUDGE KELLEY: Exhibit 27?

WITNESS HOWE: No, sir. I think maybe the last panel might have carried it with them. I'm sorry.

WRB/eb11

JUDGE KELLEY: Don't apologize.

(Document handed to the panel.)

MR. ROACH: Returning to the 1982 column, 41, as I said, should be 42.2.

The 26 should be 27.5.

The 36 should be 38.7.

For 1983, 19 should be 20.1.

55 should be 56.9.

And 54 should be 57.5.

And the column which is entitled "Life," 44 should be 46, 42 should be 44.3, and 63 should be 65.8.

MR. RUNKLE: When you supplied the figures for "Life," Counsel, was that "Life" to date or "Life" --

MR. ROACH: This is to the end of the year 1983, which I assume is what you used in this document originally.

Do you know if that was correct?

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: I think you said this, but is it clear now in the record, the basis upon which your figures differ from Mr. Runkle's?

MR. ROACH: I believe so. These numbers I have given are based on maximum dependable capacity. Mr. Runkle's numbers are based on design capacity, and that's the difference.

JUDGE KELLEY: It is a difference-- I sort of

WRB/eb12

sense, Mr. Runkle, that these numbers don't make much difference for your present purpose. Is that fair to say?

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: Okay.

So I think in the interests of accuracy it is good to get these numbers in, and both sets are in, your numbers plus the Applicants' set.

Excuse me just a minute.

(The Board conferring.)

End WRB 2
WRB 3 fls

WR wbl

JUDGE KELLEY: Just to provide a little context for us this morning, and recalling yesterday afternoon, we did not make any sweeping across-the-board ruling yesterday ruling out capacity factors and forced outage discussions for all purposes on this contention; we did say -- and we would say again -- that we have some skepticism about the relevance of capacity factors and forced outages, if we are going to get to that. The only specifics I think we provided yesterday were, in the first place, if you want to talk capacity factors, and your thesis was a low capacity factor indicates a bad manager, therefore it is pertinent, we then looked at the Robinson lifetime factor and saw what we saw, and that was the end of that discussion, at least on Robinson.

With Brunswick this morning we have a below industry average, anyway, lifetime number, and there are some other factors that have already been alluded to, but we don't think that what we said yesterday in the context of Robinson automatically translates to Brunswick this morning; what we said about -- we haven't even gotten to forced outages, and I don't whether Mr. Runkle wants to go there, so we'll pass on that at the moment. But, again, I think we indicated some doubts about the line of questioning, at least if it proceeds in depth, because of our feeling that it tended to be somewhat marginal, unless isolated very carefully.

With those observations -- and, of course, the

WRBwb2

parties can object as we go along, but we are not going to preclude questioning at this point.

Go ahead, Mr. Runkle.

BY MR. RUNKLE:

Q. Sir, earlier you had said that Unit 1 at Brunswick had been operating at 85 percent capacity.

A. (Witness Howe) I beg pardon; I said 83 percent.

Q. And that would be to date?

A. That was from January 1st until approximately the 8th, as I recall, of '84. Over a longer period of time-- You will recall, perhaps, Unit 1 returned from an extended outage on August the 29th, 1983, and for the annual period from August 29th, 1983, to August 27th, 1984, we achieved a capacity factor of 74.98 for that annual period.

Q. And when is your next schedule refueling outage?

A. For Unit 1 that will commence in March 1985.

Q. Looking at this amended JI-27, in 1983 for Unit 1 the overall capacity is 20.1, is it not?

A. Yes.

Q. Did the evaluation given you by Mr. Utley for that time period reflect the low capacity -- the low performance of the Brunswick Unit 1?

A. Mr. Utley was fully aware that the low capacity factor of Unit 1 during 1983 was a reflection of the fact the unit had been off for an extended period of time performing

WRBwb3

NRC-mandated modifications; therefore, I don't believe there was any disappointment expressed by Mr. Utley with the fact that when the unit did run it ran quite well. However, with the extended outage in order to perform these modifications, it was fully expected that the unit would have a substantially lowered capacity factor.

Q. And the same for Unit 2: in 1982 it has a fairly low capacity factor, does it not?

A. Here again the unit had been out on an outage, performing NRC required modifications, plus reliability modifications.

Q. In looking at capacity factors for the Brunswick units for the last -- well, since their operation, would you say they're above or below the industry norm?

A. I would say that from the period of the commencement of their commercial operation up to 1983, I think we have already put into the record that these are below industry average; industry average being normally approximately 60 to 62 percent capacity factor for a boiling water reactor.

Q. Can you explain some of the reasons for some of the forced outages since 1979 for these reactors?

MR. ROACH: Objection to the question. I think it's an overaly broad question. He's asking them to explain details of outages covering a five-year period.

JUDGE KELLEY: Which exhibit is the forced outage

WRBwb4

exhibit?

BY MR. RUNKLE:

Q. Sir, can you get before you JI-24 and also JI-25?

A. (Witness Dietz) Is that Attachment I-16?

Q. That's 24. And JI-25 is Attachment I-18.

JUDGE KELLEY: Let me ask whether the witnesses prior to right now have looked at this exhibit.

WITNESS DIETZ: Yes.

WITNESS HOWE: We looked at them. I have both of those in front of us now.

JUDGE KELLEY: What page are we on, Mr. Runkle?

MR. RUNKLE: I think it would be easier to understand the line of questioning look at JI-25.

WITNESS HOWE: Is that Attachment I-18, Mr. Runkle?

MR. RUNKLE: Yes, sir.

BY MR. RUNKLE:

Q. Sir, have you had a chance to review this document?

A. (Witness Howe) I have read over it; yes.

Q. In your opinion does it purport to give scheduled outages for the two Brunswick units?

A. Yes.

Q. And it would give these plant outages for each of the years since 1978 for each unit, does it not?

A. That's correct.

Q. And if we look at the righthand column which

WRBwb5

gives the reason for the extension of the outages, could we determine from this document the differences between a scheduled outage and an actual outage -- the actual duration of an outage?

A. I think your two center columns reflect the mathematical difference expressed in hours and minutes between the actual duration and the scheduled duration.

A. (Witness Dietz) The attachment by definition denotes one list of planned outages.

Q. And we could look down this list and see how long the actual duration of the outages was, could we not?

A. That's correct.

A. (Witness Howe) That's correct.

Q. And looking down several of these, the one in 1982, in 1983, which is on the second page at the top, was quite a lengthy outage, was it not?

MR. ROACH: I object to the question. I think we're continuing to go along a route that is not likely to lead to anything relevant to the question before this Board.

Just asking general questions about duration of the outages, which I think is purely an economical consideration without any showing of safety significance, I think is improper.

MR. BARTH: We join, your Honor, and go further: these questions are not going to adduce relevant evidence

WRBwb6

within the definition of Rule 401 of the Federal Rules of Evidence. They will not tend to make a material fact to assist his case more probable than not.

We think the entire line is not relevant, and I would like a continuing objection, if it please your Honor.

JUDGE KELLEY: Well, why don't we at least let Mr. Runkle finish the questions with regard to one of these outages, just to see where it goes, if nothing else.

Go ahead, Mr. Runkle.

The objection is overruled.

BY MR. RUNKLE:

Q. Was the outage, the one that is listed at the top of page 2 of this document, that was a lengthy outage, was it not?

A. (Witness Howe) Yes, it was.

Q. And that was from 1982 to 1983; is that correct?

A. That's correct.

Q. What were some of the modifications of the plant which occurred at that time?

End-3

AGB fls

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#4

A (Witness Howe) I think that included -- this is from memory. Right now I don't have a complete listing of outage activities. I think during that time we were performing activities on the augmented offgas system, the retubing of the condenser, we work on MSIV's, we work on the RWCU's. maybe Mr. Dietz may recall that were contained within that outage.

A (Witness Dietz) We were also involved with the replacement transition modifications from digital to analog in our instrumentation system.

Q And so this outage was initially a scheduled outage and you knew when you went in what needed to be done, did you not?

A That's correct. There was a defined work scope prior to entering into the outage.

A (Witness Howe) I would make a point to add on to that, Mr. Runkle, if I may. Because I think you touched on a key point.

When you speak of an outage schedule, what you are defining at that time is a known scope of work. It is not unusual at all, once you have entered into an outage. and this is I think very common within the nuclear industry, and as you are proceeding in this outage, you find additional activities that bear attention during that outage. These are either self-identified or, in some cases, perhaps

AGB/pp

new regulatory requirements may be issued during the course of an outage and can be accomodated within the time frame of that outage. Thus, the outage is extended.

I think it's erroneous to draw the conclusion that because the time of the initial outage and the time of the actual outage have differences to suggest in any way that this is a uncontrolled situation. In fact, it may be highly controlled. It may be representing very effective management and very effective utilization of the fact that the unit is down at that time and that from systems operation point of view and safety points of view it may be the most prudent exercise to continue that outage in order to accomodate some new requirement or to correct some newly identified situation.

Q In analyzing and scheduling the need for an outage, a planned outage, do you look at the critical path method? Do you use the critical path method?

A We are currently using the critical path method called ARTEMUS.

Q And ARTEMUS is an acronym, is it not?

A I'm not sure --

A (Witness Dietz) ARTEMUS is a trade name for a computer assisted scheduling program that utilizes the critical path method.

Q And you do refer to ARTEMUS in your prefile

testimony, do you not?

A (Witness Howe) Yes, under the section dealing with outage management.

Q And what does the critical path method of outage scheduling -- could you describe that briefly to us?

MR. ROACH: I understand what your Honor said, I just have to object to that question. I just can't imagine where this is going. If he wants to ask about an individual outage and try to figure out what happened during the outage and try to see something that should have been done wasn't done, I think that may have some appropriate value. If he wants to talk generally about outage scheduling plan, I thinks that completely relevant. I think you have instructed him to go ahead and ask about a particular outage and see what he can make of an individual outage.

JUDGE KELLEY: Mr. Runkle?

MR. RUNKLE: In talking about a specific outage, you need to find out what tools management uses to schedule that outage. If they're doing a critical path that has to be developed before the outage begins. If it's a planned outage, we don't have anything into the record as to what the critical path method is.

JUDGE KELLEY: It's still pretty early in the morning. I think these objections are premature. You may be right but I don't think we have enough on the record yet

to make that determination one way or the other. And you may be wrong. Maybe there's something useful here. When you get your foundation laid then, could you get into a particular outage and so we can see how this is all going to fit together?

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: Fine, go ahead.

BY MR. RUNKLE:

Q Sir, could you briefly describe what the critical path method is?

A (Witness Dietz) The critical path method represents a sequence of events commencing with the opening of the generator output breaker to the reclosure of the generator output breaker upon completion of a prescribed scope of work activities. The critical path method utilizes a sequence of events such that that sequence of events is established in such a pattern that interferences and interdependencies between the work activities are identified. Ultimately leading to a prescribed series of events that are, in essence, dependent upon each other for completion prior to moving to the next scheduled sequence of events.

Is that clear?

(No response.)

Q Before you went into the outage from '80 to '83,

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which is on the second page of JI 25, did you determine a critical path for this outage?

A The critical path would have been defined for this outage, yes.

Q In an outage of this type, what is the major critical path?

A The major critical path would be typically the major work activity that was in progress. In this case, I believe that the critical path was in essence, a dual critical path between Taurus modifications and the condensor retubing.

Q And the condensor retubing?

A Yes.

Q As this document shows, the actual duration of this outage was 32 percent greater than the plant duration, was it not?

A I haven't calculated the percentage but the records indicate --

Q Would you accept, subject to check, that approximately --

A That's correct.

Q Did this extention of the outage from scheduled duration to actual duration, was that due to extensions of the Taurus modification or the condensor retubing?

A As indicated on the summary sheet here it

portrays a series of events that were in and of themselves contributed to the outage extension. I think in large part, and I don't have the outage summary sheet or outage summary report to refer to, but the establishment of operability and periodic testing that was completed -- we were involved with a very major outage. There were many modifications that were being completed. And of course one of the difficulties in coming out of an outage like this where you have not only major outages but many minor outages, is the fact that you have established within the plant documentation appropriate testing, appropriate levels of training have been accomplished, and in a review of this, I think one of the major contributors to the delays was the fact that we were delayed basically by management perogative to insure that the documentation levels of training and the necessary procedural steps have been completed.

A (Witness Howe) I think there was another factor also in the extension of this outage and that was a change in the seismic design criteria dealing with the structural supports for cable trays and conduits. Whereas at one point in time these were somewhat field run activities, new seismic design requirements dictated that these be individual designed and in turn this necessitated a considerable amount of engineering, which

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at the beginning of the outage had not been scheduled because it wasn't required. And so this added an additional delay into the outage.

I think to add to a point that Mr. Dietz just spoke of, there were some conscious decisions made with respect to the total completion of procedural upgrades, PT upgrades, MI upgrades, that we recognize would introduce a delay in this outage.

However, as you trace back to the events of 1982, part of our problems there could be attributed to deficient procedures. So we made a very conscious decision, in essence, bit the bullet, that all the paperwork would be done and done in an acceptable manner before this unit was brought back on the line.

By way of background, as part of the Brunswick improvement program we had embarked on an enormous program rewriting some 3,000 operating procedures, operating ennunciator and ESF procedures It was a team effort between CP&L and consultants involving independent review by a quality assurance and onsite nuclear safety and operating personnel.

These procedures range from a few pages to a rather voluminous documents. I don't think anyone else has ever decided to rewrite 3,000 operating procedures in the timeframe that we undertook. We weren't about to let

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this backslide by coming out of an outage with inadequate paper.

So I would say that part of the extension of this outage was to abide by our own commitment to for verbatim compliance with regulatory requirements. And that did add time to this outage. I think it was an exercise in prudent management and nuclear safety and I would do it again today if necessary.

Q Were several of the changes, such as the change in seismic design criteria -- were those, in your opinion, as a result of TMI changes?

A (Witness Dietz) Seismic related changes came about as a result of the analysis that was done associated with the Fitzpatrick station operated by the state of-- higher authority of the State of New York.

And based upon the determination of inadequacies in the seismic analysis associated with that, subsequent bulletins were issued 79027 and 14 that led to the upgrade activities that all operating facilities had to contend with.

If I might, I'd like to go back and touch briefly again on this forced outage.. And I think, you know, obviously the best comparison is to substantiate what Mr. Howe talked about, is to compare the impact of taking the head off the vessel, if you will, looking inside and when that happens, you're obviously entering into an unknown

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scope of work.

If you take a look today at the status of Brunswick Unit 2, which entered into, has been involved in a very major outage, that unit right now is within a few weeks of being returned to service on schedule, ahead of schedule. And why is that?

Well, we've obviously learned from our scheduling problems of the past. But most importantly I think the work scope that we're contending with reflects the fact the schedule is originally built and conceived remain, in essence, intact. And we did not incur the unknown scope of work that, unfortunately, the plant has had to contend with in the past.

A (Witness Howe) I think, Mr. Runkle if we could go back into these outages. if there was some way to delineate clearly for your benefit. the fact that the known activities were completed within the known and prescribed time period. It is the unknown that causes this delta-T as far as the extension of the outages.

So those things which we planned to do and knew we were going to do, I feel we did them effectively and efficiently. It's the unknowns that you encounter, either internally or from external sources that will then contribute to an extension of an outage.

Here again, I don't think it's an exercise in

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poor management, not to be clairvoyant. These things -- you get surprises, you know. You take your car to the garage and the fellow says, I'm going to change the spark plugs. And when he does, he finds he's got other difficulties. So when you go back sometimes the bill is a bit larger than one had expected to pay.

And likewise with any large piece of mechanical equipment. When you get into it, you can find that there are other situations that merit attention. Nuclear safety reasons or other reasons.

I think it's prudent management to keep that unit down until it is in good condition to be brought back up.

Q In your tech specs that you operate under, should they not cover all the knowns and and unknowns.

A The tech specs don't cover such things as the necessity to repack a valve or to realign a pump, things of that sort. They are not a prescription to the mechanical maintenance of the plant. Nor are they all envisioning as to what new regulatory requirements in the sense of modifications to the plant may come out. They deal with the operation phase of the plant not its maintenance or modification.

Q And those kind of things you save up until there's a planned outage?

A Well, the saving up of those would not constitute

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a compromise for public health and safety, we would so do. It would be prudent. However, if there were a situation in which we felt that to defer a modification or a maintenance activity or a repair activity, if that deferral would in any way compromise the safety of that plant, we would bring that plant down immediately to perform the necessary corrective action.

Q And whose decision would that be in CP&L management?

A That would be, probably, based upon the recommendation of Mr. Dietz and myself, we would consult on this and we would then notify systems operation that we are going to bring the unit off the line to perform a certain activity. I would obviously notify Mr. E.E. Utley this, as to a matter of keeping him informed. But I feel that Mr. Dietz and I have the full authority to bring that unit down at any time we feel it is necessary. And if I'm absent, Mr. Dietz certainly has the full authority at any time that he feels it's necessary to bring that unit off the line, for public health and safety, he is fully authorized to bring that unit down.

Q And he can do that at any time without consulting anybody?

A Yes, sir. If he feels there is a matter of imminent danger and safety, he has full authority to shut that plant down. And that authority extends further down into

AGB/pp 15

the organization, to the shift operating supervisor or the shift foreman.

They are authorized to shut that unit down if there is any compromise of safety. There is no bureaucracy involved in that type of process. The man on the spot makes the decision. And he pushes the rods in and the unit is brought down and he is fully supported in that action.

Q And Mr. Howe, you also have that authority?

A Yes, I also have that authority.

Q Does Mr. Utley have that authority?

A Mr. UTley would have that authority. Although, I dare say that he's somewhat removed from the immediate situation, but if he felt that our judgments were imprudent, he could certainly override us and insist that the unit be brought down.

Conversely, however, he cannot override us and insist that the unit be kept up.

JUDGE KELLEY: Would you like a cup of coffee?

MR. RUNKLE: Sure.

JUDGE KELLEY: Ten minutes.

(Recess.)

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JUDGE KELLEY: Back on the record.

Mr. Runkle, you can resume.

BY MR. RUNKLE:

Q Can I draw your attention now to JI-24 which is Attachment I-16?

If you will turn to the seventh page from the end of this document which has off-line outages for Brunswick Unit 1 for 1982?

Sir, do you have that page before you?

A (Witness Howe) Yes, we do.

Q And if you look at Number 11 down there, that is the audits that we have been referring to, is it not?

A (Witness Dietz) Yes.

Q And that also would go over to the next year, into 1983, would it not, which would be a couple of pages later, Brunswick Unit 1 off-line outages for 1983?

A (Witness Howe) Yes.

Q If you will look at Number 9 at this page is another instance of outage, is it not?

A (Witness Dietz) Which page?

Q It would be the 1982 outages for Unit 1.

A Yes.

Q And that is another fairly lengthy outage, is it not?

A That's correct.

eb2/AGB

Q And the reason give for that outage is local leak rate testing. What does that entail?

A This is a series of tests which are accomplished as required by technical specifications in compliance with 10 CFR Part 50, Appendix J. It involves a series of tests, basically pressurization between components to measure the physical integrity of the device to maintain a leak-tight capability.

Q And this was a forced outage, was it not?

A That's correct.

Q And the plant remained off-line during this time. Is that not correct?

A That's correct.

Q During this time was there the opportunity for additional surveillance of other systems of the plant?

A The work scope that we were involved with in the July 16th to October 17th outage was directed toward the accomplishment of required primary containment isolation-related testing in accordance with Appendix J, as I indicated.

The scope of surveillance that you're talking-- I'm not sure what you're leading to, Mr. Runkle.

Let me preface that further by stating that the accomplishment of leak rate testing is very complex in that you take physical pieces of a system, as an example

AGB/eb3

instrumentation penetrations that in and of themselves constitute limiting conditions for operation.

You have to maintain certain elements of the plant in place in compliance with technical specifications. Therefore, the ability to take on and perform additional work is significantly impacted by the complexities of trying to schedule additional work on another system that in essence is not available to take out of service because of the limiting-condition operation to support this testing.

So the scope of testing that we were involved with -- and again, I don't have the outage report -- if I remember correctly was probably restricted pretty much to the accomplishment of this testing.

A (Witness Howe) Also there was another factor that contributed to the extension of this outage. You will note that time on that, Mr. Runkle. This occurred July 16th, '82, which was during the time phase where we discovered that we had failed to perform a certain surveillances. And the units were brought down.

One unit was already down on a scheduled outage and the other unit was brought down, recognizing that we were not in full compliance with all regulatory requirements. And under the instructions all the way from the chairman of the board, we were not going to bring that unit back up until we had satisfied ourselves that all technical specification

AGB/eb4

surveillances had been fully identified and that we could show a direct one-on-one correlation with the surveillance requirement and a procedure for the performance of that surveillance, and that that procedure was then reviewed to determine its technical adequacy, and that records were then checked independently by the Quality Assurance Department to determine in fact that the surveillance had been performed and performed in a timely manner, and that the results of that surveillance did in fact comply with the requirements of the technical specifications.

There were numerous things that occurred during that summer of '82, and obviously on the 17th of October, we had determined that the unit was in condition, both regulatory-wise and mechanical, to be brought back up.

This was determined, and also a presentation was made shortly before that, I think on something like about the 14th of October, as I recall, to Mr. James O'Reilly, Regional Administrator of Region II, and to Mr. Sherwood A. Smith, Junior, chairman of the board, Carolina Power and Light, to offer evidence that the unit was in fact in full compliance.

We were then authorized to proceed with startup.

So part of this outage duration that you see there was a voluntary act on CP&L's part, and recognizing that in all candor that perhaps if we had not brought the unit down,

AGB/eb5

the NRC would have had little option but to have caused us to bring the unit down, at which time we went through part of the earlier phases of the Brunswick improvement program, if you like.

So I think the notation here, the reason, the local leak rate testing, sort of understates the situation that occurred between July of '82 and October of '82. There were many more, other activities other than just the fact of the local leak rate testing, although as Mr. Dietz points out, that, in and of itself, is a very complex and very time-consuming process.

A (Witness Dietz) I would like to add to that.

I guess the thing to take into account, if you take a look at the events that led to the determination that we were in non-compliance with our surveillance requirements for conducting leak rate testing, the definition and the scope of valves that were included within that testing had been subject to change and revision through the interface and the use of various contractor support personnel, as well as a change of personnel assignments within our own organization.

There were a series of revisions to that procedure for the accomplishment of the tests that went back as early as 1977 with subsequent revisions in between. Not only were we in a position to recognize the scope of valves that had been addressed to us as not having been tested as added into

AEB/eb6

the Unit 2 scope of work, we also realized in taking a look at the scope of valves that were included within the Appendix J program, there was a lot of uncertainty as to the legitimacy and the total scope of that testing program.

So it was not a matter of just going out and testing valves. We brought in a group of experts from United Engineers. We brought in technical consultants from General Electric, and our own personnel and sat down and developed and went through a very rigorous review of the primary containment isolation Appendix J program to establish a program that we had 100 percent confidence in satisfied federal requirements.

So if we were to-- My point is if we were to merely to have to go out and physically test the valves, that would have been a very easy scope of work. We were involved with a reassessment and a redefinition of the valves that were involved with this program.

This is not clear-cut. It continues to be an area of concern even today in that it is my opinion that our program encompasses many valves that should not be included within the scope of the Appendix J program. However, to insure total compliance and conservatism and regulatory sensitivity, those are currently included and will be subject to further regulatory interface to have those valves removed from our Appendix J program.

GB/eb7

Q Gentlemen, were you both here last week when Mr. Utley and the previous panel was discussing the incidents and actions around the $600,000 civil penalty?

A Yes, I was.

A (Witness Howe) Yes, we were.

Q He could speak to it up to a point, and he said there were some technical questions that you might be better to ask -- better to answer.

Do you have any additions to his discussion of that problem that you might like to make the record clear on?

MR. ROACH: Object to the question. I think he is going to have to be a bit more specific than just anything you would like to add to the discussion last week.

JUDGE KELLEY: Yes, I think that's a bit broad. Be a little more specific.

BY MR. RUNKLE:

Q Do you have any changes or would you like to make any changes or additions in Mr. Utley's testimony regarding the $600,000 fine.

MR. ROACH: Object to the question. The same basis. I think if he wants to ask them questions about that event I think he needs to ask specific questions that they can answer with a specific response. I don't think he can ask a broad general question about is there anything you would like to correct, is there anything you would like to

AGB/eb8

add, is there anything you would like to respond further.

I just don't think that sort of question is proper.

JUDGE KELLEY: I think a question that says is there anything you would like to correct or disagree with is fair enough. They sat here and listened to it If they disagreed with something they can say so.

As far as "addition" goes, that is sort of open-ended and I would ask you to get more specific in that regard. So I am overruling in part, and sustaining in part.

WITNESS HOWE: I have no additions or corrections to make.

BY MR. RUNKLE:

Q Mr. Dietz?

A (Witness Dietz) No, I have no additions or corrections.

Q In your review, your overall review of the surveillance systems, did you determine that there were other systems not having proper surveillance?

A In addition to the valves which we just discussed associated with the Appendix J program, we determined, as Mr. Utley presented in his testimony, that the precipitating event was based upon a determination in an event review and analysis that the 27 DV, which are undervoltage, degraded voltage relays associated with our emergency buses, had not been tested according to the surveillance requirements as

AGB/eb9

provided by our technical specification.

In addition to that we determined that a functional test associated with the automatic closure of the inboard isolation valve on the reactor water cleanup system had not funcationally been tested as part of the routine surveillance test associated with the standby liquid control system.

Those were the initiating events that led to the comprehensive self-assessment and review that we voluntarily entered into during the months of July, August and September of 1982.

Q During your comprehensive review during this period, did you locate any other surveillance systems that were being inadequately performed?

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A. Excuse me, I am looking for a piece of paper that summarizes the scope of identified deficiencies that we had submitted to the NRC in association with that review. JUDGE KELLEY: Take time to look for it.

(Pause.)

WITNESS DIETZ: We performed or identified during the course of that review a total of 38 additional regulatory non-compliances. These included 23 identified procedural deficiencies, 10 programmatic deficiencies, three administrative deficiencies and two that were classified as "other."

There was, in addition to that, several non-reportable items that we identified requiring resolution prior to the resumption of power operation. There were 27 of these including resolution of procedural, programmatic, administrative and other type of corrective actions; in addition to that, we became involved with 29 additional procedural; programmatic and administrative enhancements for a total scope of 94 identified deficiencies as a result of this self-assessment.

BY MR. RUNKLE:

Q. And this was in the time period from July to October 1982?

A. (Witness Dietz) That's correct.

agb/agb2

Q Since that time, have you reassessed or re-reviewed your surveillance systems?

A As a part of the Brunswick improvement, of course, one of the things that we entered into was a very comprehensive re-assignment, if you will, of our surveillance tracking system.

Prior to the events of 1982 the responsibility for surveillance tracking had been vested within various disciplines within the plant. As a result of the determination made in 1982, we established within our regulatory compliance group a group that was specifically dedicated to integrated tracking of surveillance tests for the entire plant.

This is a computerized program that provides on schedule a list of required surveillance tests that are disseminated to the plant; it also provides, of course, feedback relative to the accomplishment of these tests.

In addition, it has provided a management perspective such that I get a report each week that would define surveillance tests that have potentially -- have a potential for becoming overdue and, if necessary, I can initiate action to insure that the necessary prerequisites are established such that that test can be accomplished.

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Since that time, I'm not aware that we have missed a single surveillance test.

But I don't think that's the problem. The problem stems from the fact that the surveillance tests that were missed went back really to the commencement of operation of the plant.

The degraded voltage relays were introduced into our technical specifications in 1979. The problem was not a matter of performing the test, the problem was a matter of physically getting the test incorporated into the tracking system.

And, as a result of assessing -- trying to get to the root cause of this problem, of course, we have established a significant breadth of managerial controls in terms of checks and independent assessments as well as supervisory overviews to assure that any change that is made in that station is indeed reviewed, committed to and incorporated into our tracking system such that we would not be subject to such an omission in the future.

Q. And that integrated tracking system you mentioned earlier, that's the F-A-C-T-S --

A. No. The system that I am referring to that schedules -- that is responsible for scheduling and documentation of our test program is referred to by the

agb/agb4

acronym S-T-S-T.

Q. S-D-S-D?

A. No, S-T-S-T.

Surveillance Tracking System....

And FACTS that you -- The Surveillance Tracking System, right.

The FACTS that you refer to is the Fully Automated Commitment Tracking System, and it's a separate computerized tracking system that we use to monitor any outstanding regulatory-related commitments.

Q. And what are or what is a regulatory-related commitment?

A. As an example, if we were to submit a licensee event report that committed the plant to the accomplishment of a certain activity as a follow-up corrective action, that commitment would be entered into our FACTS tracking system and would be monitored and followed by the regulatory compliance unit.

As part of our routine -- and I think Mr. Howe referred to it in our pre-testimony -- in our morning meeting that I conduct at 8:15 in the morning for the plant management group, this is one item that would be discussed by a regulatory compliance representative and that's the identification of pending regulatory commitments that are due.

agb/agb5

So it provides a vehicle to create necessary management attention and coordination to insure that we do indeed fulfill the completion of the requirements as committed to.

Q. Are such things as the environmental qualification of electrical equipment, is that on the FACTS?

A. It would be tracked as a plant -- as an overall generic commitment for the plant, that's correct; as in contrast to each individual plant modification for changing out a particular device, we would not track that on the FACTS system, we would track it as a generic commitment.

Q. So if we can refer to the July through October '82 outage for a second, in doing your two major tasks at that time: the local leak rate testing and the overall review of your surveillance system, did that use primarily all the trained personnel you had at the plant at that time?

A. (Witness Howe) In performing a lot of those investigations we relied on our resources provided from corporate.

For example, corporate nuclear safety and corporate quality assurance personnel helped in the verification of satisfactory completion of surveillance tests.

agb/agb5

On the procedure rewrite program, these procedures were then reviewed by both on-site and off-site corporate nuclear safety personnel for technical adequacy and clarity.

So the effort that was embarked on known as the Brunswick improvement program did not depend totally just on Brunswick personnel; we received support from corporate activities also on that program.

Q. And the personnel that were at Brunswick at that time were kept busy on these two major tasks?

A. A portion of them were. Others carried on the normal plant responsibility duties.

Q. And those would be maintenance and other surveillance testing?

A. (Witness Dietz) You have to recognize that both units were shut down, both were involved in a significant amount of testing. The resources would be totally utilized merely in trying to support the logistics of the scope of testing that was going on on both units.

Q. And we could turn to the next page of this document which describes the off-line outages of Brunswick Unit 2 in 1982 and determine what was the actual times and dates and reasons for the Brunswick Unit 2 to be off-line, can we not?

agb/agb6

A. Yes. That page reflects outages, time off, time on and the duration of the audit and a very brief description.

Q. So the problem was actually determined Brunswick Unit 2, was it?

A. Pardon?

Q. The problem with the lack of surveillance was found at Unit 2, was it not?

A. The event that led to the detection of the primary containment isolation valve omission was precipitated by the addition of valves that were included back by revision into the period test in support of the Appendix J test program for Unit 2.

The triggering event that led to everything to begin with, I think, was the trip that occurred with the detection of the undervoltage relay omission.

Q. And which unit was that?

A. Unit 1.

MR. RUNKLE: Your Honor, at this time I would like to offer into evidence JI 24 and JI 25 and also, a previous exhibit which I had numbered and distributed to all the parties, I would like to withdraw that and not offer it for discussion or evidence or any purpose and that would be JI 26.

JUDGE KELLEY: So 26 is withdrawn and you are

agb/agb7

offering 24 and 25?

MR. RUNKLE: Yes.

And also at this time I would like to offer 27. So I would like to offer 24, 25 and 27.

(Whereupon, the documents previously referred to were marked as JI Exhibits 24, 25 and 27 respectively for identification.)

JUDGE KELLEY: This is 27 as modified, if I can so describe it?

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: 24, 25 and 27 are offered.

MR. ROACH: We object to 27 to the extent it just shows capacity factors. We don't think, as we've stated several times previously, that that is particularly significant or relevant or probitive as to the issues before the Board and we would renew the same objection.

JUDGE KELLEY: Staff?

MR. BARTH: Your Honor, we object to the admission of proferred Exhibits 24, 25 and 27. We do not think that they are material to the contention before the Board as the material is defined in Section 401 of the Federal Rules of Evidence. We have no showing or relation comparing to the management ability of these people to safely operate that plant, which hopefully

agb/agb8

someday we will address.

JUDGE KELLEY: Do you want to speak to the objections, Mr. Runkle?

MR. RUNKLE: I think that we had a full discussion of this in relation to Robinson. I think these witnesses have stated that they -- in part their evaluation comes from a look at capacity factors; it's certainly not the most important. And the outages pin down certain factual data from both their testimony and also panel one, which I think is relevant.

JUDGE KELLEY: Okay.

(The Board conferring.)

JUDGE KELLEY: The Board is going to, and does, overrule the objections and admits these three exhibits, with the following observations, however:

As to the capacity factors in 27, we have already stated more than once that we see this as being pretty collateral type of evidence. We would not see it as particularly persuasive as to one's personnel rating. But to the extent that a capacity factor is fairly low -- which is true of Brunswick over a period of time -- it might be a basis for inquiry and we have had some inquiry along those lines so we're going to admit it and let its limitations -- which we have adverted to -- go to weight rather than admissibility.

agb/agb9

As to the other two exhibits, numbers 24 and 25, which both speak to outages, we have also made some observations about outages such as a mere counting up of outages including a two-hour outage for something or other, we don't consider to be relevant.

Mr. Runkle has been pursuing another line of inquiry really this morning, restricting himself to some quite prolonged outages and why they were as long as they were and why there were longer than they were originally planned to be and it does seem to us that such weight as it is entitled to should be given and we're going to allow the exhibits to go into the record in association with the testimony that has been given.

(Whereupon, the documents previously referred to were marked for identification as JI Exhibits 24, 25 and 27 and were received in evidence.)

(Whereupon, the document previously referred to was marked for identification as JI Exhibit 26 and was WITHDRAWN.)

JUDGE KELLEY: We can proceed.

BY MR. RUNKLE:

Q Sir, in your opinion, has the Brunswick reactor undergone a substantial amount of modifications due to

AGB/pp 10

Three Mile Island and related regulatory changes?

(Witness Howe) Yes, it has.

Q Sir, can you talk a little closer to your microphone. I'm having a little difficulty hearing this morning.

A I'm sorry. Yes, it has. I think that might best be illustrated, for example, if one takes a look at the history of the budget. Both O&M and capital. And if you were to go back in a period of time, starting in '79, which was the year in which TMI event occurred our cost for O&M was $34 million. That was raised the next year to $67 million; following year, 1971 to $73 million; in '82, $108 million; in '83, $113 million; and we will probably hit somewhere on the order of $120 million a year this year. If you look at capital, capital follows pretty much the same pattern, going $34 million in '79 up to $92 million in '83. I think that gives you some index of the impact of TMI on the Brunswick units.

Q Briefly, in your budget what is the difference between O&M and capital?

A Normally the operating and maintenance expense of a plant is carried as O&M. Improvements in the plant are carried as capital. Part of the determination as to whether an item is O&M or capital is made in accordance with the Federal Energy Regulatory Commission accounting guidelines

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which are fairly complex.

I think in a simplistic manner, one might say that if you are adding something new to the plant that it becomes capital. If you are modifying an existing item, at the plant it is O&M. The impact of TMI affected both areas and certain pieces of equipment were modified and in certain TMI requirements they necessitated the purchase and installation of new equipment.

Q And the raise of these figures would also reflect inflation, labor costs, and that kind of thing, would they not?

A Yes.

Q And those are annual dollars?

A Yes.

Q Thank you.

A I think perhaps another way of looking at the impact that TMI has had on Brunswick as well as other units in the country, if you look at the authorized plant staff in 1979, the plant staff was 468 authorized positions. That has increased to in 1983, 862 authorized positions.

Q In your opinion, sir, was the Brunswick reactor forced to make more changes in other BWR reactors due to TMI?

A The TMI regulations --

MR. ROACH: I'm going to object to the question.

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This seems to be rather far afield. Mavbe Counsel can give us some clue as to what he's trving to do.

#7 AGBwbl

MR. RUNKLE: I asked the same question to Mr. Utley, I think it was Thursday or early on Friday. I am asking almost the idential question to Mr. Howe to see if he agrees with that or not.

MR. BARTH: Your HOnor, the Staff objects to the question, because what other plants spend to modify their projects is not related to the technical capability of Carolina and Power and Light to safety operate the Harris Nuclear Plant, which is the purview of the contention. I think this goes way beyond it.

I object to the line of questioning as well as to this individual question, your Honor.

If he has a special contradiction of Mr. Utley I think he is obligated to provide the witness a transcript and point to the reference and ask whether Mr. Utley was correct or not. --if that question is relevant. I'm merely talking here the procedure to do this, your Honor.

This is not a memory contest for Mr. Howe or from Mr. Dietz or for my own people later on, sir.

JUDGE KELLEY: Did you say money spent, or the amount of change is without reference to dollars? Numbers of changes, proportional? Is that the notion?

Where does that go, Mr. Runkle?

MR. RUNKLE: That's about as far as it goes. I just wanted to know--

AGBwb2

JUDGE KELLEY: But what's the purpose of the question in terms of the contention?

MR. RUNKLE: Well, as the manager of -- the overall responsible party for the Brunswick Nuclear Plant, he needs to-- I think he can-- well, he can form an opinion as to whether their plant was hit harder by TMI regulations or whether they needed to make more changes. They've got a whole history of changes in outages.

JUDGE KELLEY: So you're saying the question pertains to his competence as a manager?

MR. RUNKLE: No, it doesn't; I don't think it does that.

JUDGE KELLEY: Then what does it pertain to?

MR. RUNKLE: Whether all these changes were, in his opinion, more than the other reactors. I mean, that's the simple face of the question.

JUDGE KELLEY: So he answers yes or no: what are we supposed to conclude as a board?

How is getting the answer to that question helpful to us in deciding this contention?

MR. RUNKLE: Oh, I don't know if that one question really would make much difference in, you know, the overall determination of their management capability.

JUDGE KELLEY: Well, the direction here, as I understand it, is, the question is not relevant to the

AGBwb3

contention, basically. And so I'm saying how is it relevant to the contention? I still don't know.

MR. RUNKLE: Well, we need to put in perspective-- You know, the witness did talk about dollars and then personnel. We need to-- We previously brought out different outages that were related to changes after Three Mile Island. We need to put that in perspective just briefly in comparing that to the other BWRs in the country.

JUDGE KELLEY: Are we going to perform such a comparison?

MR. RUNKLE: It's not my intent to.

JUDGE KELLEY: I'm going to sustain the objection. I don't see the purpose.

BY MR. RUNKLE:

Q. Sir, I'd like to draw your attention to JI-28, if I could. That's a one-page sheet that has an outage schedule on it.

A. (Witness Howe) This one? (indicating)

Q. That's it.

Sir, have you had the opportunity to review this document?

A. I have.

Q. Can you describe this document to us?

A. This document is the outage schedule for Brunswick Units 1 and 2 showing the time periods in which the units

AGBwb4

would be on scheduled outage for 1984, 1985 and 1986.

Q. Have you previously presented this exhibit to any other regulatory body?

A. Yes, I have. This exhibit was PWH Exhibit 1 in the recent hearing before the North Carolina Utility Commission in support of CP&L's request for a rate increase.

Q. Do you have any changes or additions to make on this?

A. I see no additions or corrections to be made on it at this time.

End-7
wrb fls

WRB8/ebl
fls AGB 7

Q Unit 1 appears to have a 46-week outage beginning in March of next year. What is the purpose for this outage?

MR. ROACH: Object to the question. We have discussed previously historical outages. Now we're talking about prospective outages.

I think any relationship this might have to the ability of Carolina Power and Light Company to safely manage Harris is de minimus, if it exists at all. I think it would be helpful if Counsel would give us some indication of what he hopes to accomplish here.

MR. BARTH: We join in the objection, your Honor.

JUDGE KELLEY: Mr. Runkle.

MR. RUNKLE: Both Unit 1 and Unit 2 will have lengthy outages. Besides routine refueling and maintenance, they will be doing modifications centered around the intergranular stress corrosion cracking which is the information I have. And they found out about this at some time in the past and have waited, you know, until 1985 and have scheduled one for 1986 for the other unit.

MR. BARTH: Sir, could we ask for a proffer as to the relationship of intergranular stress corrosion cracking to the technical qualifications of the Carolina Power and Light to manage the plant safely? And then we could have an idea if the question is material or relevant.

JUDGE KELLEY: How does it tie in with management

WRB/eb2

and safety?

MR. RUNKLE: Sir, they have known about this problem for some time.

MR. BARTH: The time period they have known about this doesn't appear in the record, sir. That's a statement of Counsel. We have no evidence inthe record to support that. Whether they knew about it or not does not make it relevant to the technical capability of the company to operate the plant.

JUDGE KELLEY: The Board will consider this for a minute.

Is there anything else to be added, Mr. Runkle?

MR. RUNKLE: I agree with Mr. Barth that some of this is not in the record yet. I intend to put it in the record.

JUDGE KELLEY: Okay. We'll take a minute.

(The Board conferring.)

JUDGE KELLEY: Well, as an initial matter, the Board would like to-- We think we know what this is about. We would like to find out if we are wrong or right, if you can just tell us.

Does this shutdown have to do with repairs for intergranual stress corrosion cracking?

WITNESS HOWE: Yes, sir, in part. Other modifications are being done at the same time.

WRB/eb3

JUDGE KELLEY: But is that a primary reason for this being done?

WITNESS HOWE: One of the primary reasons, yes. There are several others.

JUDGE KELLEY: But as far as this particular phenomenon goes, it is our understanding that that particular phenomenon is a generic problem that affects BWRs all over the country.

WITNESS HOWE: That's true, sir.

JUDGE KELLEY: This is something the NRC has known about for a good many years. And I gather you are operating under some safety margin, but are you approaching the margin and therefore you have to shut down and repair, or where are you with regard to the margin?

WITNESS HOWE: At the present time we are operating with full sanction of the NRC. We have six welds on Unit 1 which have weld overlays. I think we have ten overlays on Unit 2. The Commission has indicated-- At least the ACRS has indicated that when you find a flaw you should overlay it which we have done.

And we have elected to proceed with the replacement of the piping at this time on Unit 1. They are obviously backing out of the 1985 schedule. There were engineering efforts that had to precede the removal of the recirc pipe and replacement.

WRB/eb4

There were materiel procurement procurement. This pipe is 12-inch, 22-inch and 28-inch seamless and rolled weld pipe with bends. Procurement time for some of this is as much as 48 weeks for delivery, plus time for polishing, electropolishing.

I feel that the schedule we are on is consistent with the norm of industry. There have been several other units that elected to move earlier on this pipe replacement, not because of a safety problem but because of convenience to schedule. And we are fitting this in within the timeframe-- At the present time, the Commission has taken the position that a weld overlay has an acceptability of one fuel cycle.

So if you were to backtrack from March of '85 on Unit 1 18 months, you would find that that was the time that we performed the required UT inspections of the pipe and determined that we did have some indications.

One thing I would like to put in perspective, Mr. Chairman, is that at no time has the NRC declared this to be a safety issue. It is a reliability and economic issue, but it has not been defined by the Staff as a jeopardy to public health and safety.

These are large pipes. They undergo intergranular stress corrosion cracking whose track can be monitored, tracked, its growth rate predicted, so it is not a guillotine rupture-type of a break as one would postulate for the

RB/eb5

purposes of TID-14844. So the determination of when to do it fits in primarily on the basis of the utility's schedule plus the acceptability of their weld overlays.

JUDGE KELLEY: Let me hasten to add, as you have probably already figured out, I am not an engineer. But whether it is safety or not, I think the point we wanted to make was this is not something that is peculiar to these reactors. We just don't see why this particular phenomenon would be a predicate for questioning management competence.

Now you did say that this particular -- these two shutdowns were occasioned in part by this corrosion problem, but what we're trying to find out is whether we should pursue further questioning about these future shutdowns.

Could you indicate briefly what the other reasons are for these shutdowns?

WITNESS HOWE: We would refuel the reactors at that time. We would perform additional maintenance. We would perform some 7901B modifications required by regulation.

JUDGE KELLEY: What are those?

WITNESS HOWE: Those deal with the environmental qualification of instruments for accident/post-accident environment, and Appendix R, dealing with fire protection. But the principal efforts during that time would be the refueling and the replacement of the recirc pipe loop.

JUDGE KELLEY: The length, the ten months or so,

WRB/eb6

is driven by the pipe replacement or refueling?

WITNESS HOWE: Primarily the pipe replacement.

JUDGE KELLEY: Well, I think in light of what you said, we just needed some further information. We have heard arguments from Counsel. We are going to sustain the objection on the ground that this has no bearing on management competence.

Let's take a short break and then we'll go for another 45 minutes or so.

11/24

(Recess.)

JUDGE KELLEY: Let's go back on the record.

Mr. Runkle.

MR. RUNKLE: At this time I would like to make an offer of proof on JI-28, and put in the record those questions, a couple of questions I expected to ask and the answers I expect from the witnesses on this exhibit.

JUDGE KELLEY: Go ahead.

Let me say as a precedent matter if an offer of proof is extensive, at some point I might say to Counsel you can do that but go and write it rather than taking the time here. But if it is a question of an answer or a couple, go ahead and do it.

MR. RUNKLE: Do I ask that question of the witness or-- Do I just give you the question and the answers that I have before me?

WRB/eb7

JUDGE KELLEY: Just what's before you.

MR. RUNKLE: All right.

The question-- The first question is when did the NRC require all intergranular stress corrosion cracking problems to be remedied? And the response is 3/31/1985.

The question then of the witness is what were the reasons CP&L had for delaying remedying this problem until December 1, 1985?

And there is a series of answers. I have some. The witness can supply others.

The third question is did the NRC agree to this delay in remedying the problems of intergranular stress corrosion cracking?

And following up your questions would be further questions on the witness' statement that this is not a safety issue.

JUDGE KELLEY: Okay.

So those questions and anticipated answers are in the record as an offer of proof. JI-28 can also be in the record in association with the questions as an offer of proof.

MR. BARTH: Your Honor, the Staff would like to observe that this is an improper proffer. On a proffer he must demonstrate "I expect the witness to testify to A, B, C, and this relates to my case by X, Y, Z." This has not been

WRB/eb8

done. There has been no showing what expected answers will come from these witnesses which will support his case or in any way impeach the case they've given.

JUDGE KELLEY: I thought he gave expected answers to the questions and he indicated a line of questions that he wanted to ask.

MR. BARTH: He has made no demonstration or showing that the testimony he expects to elicit will impeach what they have stated or will support his case, your Honor, which is a necessary, integral part of a proffer.

Thank you.

JUDGE KELLEY: Well, the Board will just add that the answers you expect to be forthcoming with regard to NRC approval and so on were not-- The point is we are not getting into it one way or the other. You're just making an offer of proof, and that's what you expect, and you may or may not get such an answer.

But we are excluding this line of questioning precisely because we do think it is irrelevant, and to then require a showing of relevance of something we have already said is irrelevant is I think unreasonable.

So we will allow it in as stated as an offer of proof.

MR. RUNKLE: And that offer of proof would also include any other parts of the record that address this

WRB/eb9

exhibit, your questions to the witness, for example?

JUDGE KELLEY: Well, I don't know that that would be an offer of proof so much as-- I mean those things are in the record. You can cite them. You know, if your point is citing to other things that pertain such as the questions I made to the witness, sure, you can cite them.

(Whereupon, JI Exhibit 28 was marked for identification and was received in evidence in association with the offer of proof.)

BY MR. RUNKLE:

Q Mr. HOwe, in your prefiled testimony you state that you represent corporate management at the Brunswick plant, do you not?

A (Witness Howe) Yes, I'm a corporate officer.

Q What percentage of your time do you spent at the corporate office?

A Oh, a very small percentage. I am stationed on site and reside nearby. Maybe three days a month I may be in Raleigh.

Q What is the difference between having a vice president, a corporate vice president on site and having a general manager of the site with additional responsibilities?

A A general manager on site is responsible for the

WRB/eb10

operation and maintenance of the plant itself. There are other organizations on site that also report to me, such as the Engineering and Construction Section, the Outage Management Se-tion, the Site Planning and Control Section.

Brunswick is a department and as such has multiple sections which carry with it a department head level in charge of that department.

Q You meet with the other nuclear project managers monthly, do you not?

A Yes, we do.

Q Do you have any other contact with these managers outside the monthly meeting?

A Yes, I do.

Q And what are some of those contacts?

A Phone conversations, or I may see them at other meetings, not explicitly designated as the monthly project management meeting.

Q Are you aware of significant incidents at the other nuclear power plants?

A When you say "other nuclear power plants" do you mean those belonging to CP&L?

Q Yes, sir.

MR. BARTH: Could we have a clarification? What is a "significant incident"? I'm used to NRC reporting terms but this is a new one to me, sir.

WRB/eb11

JUDGE KELLEY: Can you elaborate?

MR. RUNKLE: I did not mean to put it into any reporting terms or anything. To me it was a fairly broad generic term: significant occurrences, major happenings.

JUDGE KELLEY: Having a safety significance?

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: In a general way.

Okay.

WITNESS HOWE: Yes, I'm aware of those. I am normally aware of those.

BY MR. RUNKLE:

Q Mr. Dietz, you stated earlier that every morning at 8:15 you held a meeting, did you not?

A (Witness Dietz) That's correct.

Q And you are the one that conducts and runs these meetings, are you not?

A That's correct.

Q Who attends these meetings?

A All disciplines on the site would attend; management level participation.

Q And those would be all people that report directly to you?

A No. The attendance at the meeting includes the manager of Environmental and Radiation Control, the director of Regulatory Compliance, the manager of Operations, the

WRB/eb12

manager of Maintenance, the manager of Technical Support, the director of Administrative Support, the manager of Technical and Administrative Support, the director of Environmental Control, and manager of Quality Assurance, the director of Management Control, George Oliver, the Manager of Outages, the manager of Engineering and Construction, the Engineering manager, and the manager of Construction.

You know, I could go on and on. It's a total scope representation by all members of management located at the Brunswick site.

Q So those would be the managers that report directly to you?

A No.

Q Those are the ones that report directly to Mr. Utley and the other on-site corporate nuclear safety/ corporate quality assurance and training?

A (Witness Howe) Not the ones that report to Mr. Utley. I'm the only person on-site that reports to Mr. Utley. I attend, my four section managers attend, some of their subordinates, as Mr. Dietz has outlined, attend, and the ranking individuals for training, on-site nuclear safety, and on-site QA/QC attend, plus representatives from Employee Relations and on some occasions, the director of Community Relations.

Q ANd, Mr. Howe, would you consider this to be your

WRB/eb13

management team at the Brunswick plant?

A Yes.

Q And you feel that with all these people meeting once a day that issues that arise are properly handled?

A It's a very short meeting. We look back at approximately the last 24 hours. We look at the day's events, and then we look forward through the use of the FACTS tracking system Mr. Dietz described earlier.

I think it is a good chance for everybody to be cognizant of the status of the plant, any particular unique situations that are occurring at the plant, to disseminate information between the groups in brevity, and to discuss any particular small items that might be needed to be presented to all the management team.

This does not in fact replace more specific meetings dealing with more detailed subjects.

Q And, Mr. Dietz, in operating this -- in conducting this meeting, how much preparation do you make before each meeting?

A (Witness Dietz) I have distributed via the Operations Department a daily staff report of both units and that describes the current power level of the unit, both thermal and electrical output. It summarizes the heat rate of the unit. It lists the conductivity of the unit. It discusses significant occurrences over the past 24 hours. It

WR B/eb14

addresses limiting conditions for operation which are in place on the unit, and summarizes drywell and equipment leakage.

ANd based upon a review of this information, I would be cognizant of any problems that have occurred. I would also be aware of pending evolutions on a plant. I would have opportunity prior to that meeting to speak with the responsible manager to insure thatthe scope of what could potentially impact the entire management group would be brought forth, discussed, and any coordination problems resolved.

Q What input does on-site Quality Assurance make into the daily status report?

A On-site Quality Assurance would not be contributed to the report. We publish a set of minutes following that meeting which basically summarizes the scope of what we discussed, and it would highlight any items of concern that are brought up.

Basically the meeting transpires initially with a review of plant status and discussion of the significant events by the manager of Operations.

Following that is a brief discussion by the manager of Maintenance relative to any actions which he has in progress or plans to implement as a result of what the manager of Ops says.

We then review the outage status of the unit, and

WRB/eb15

at that point would round-table, if you will, around the group. Each manager is afforded the opportunity to discuss or bring to the attention of the group any activity that he feels warrants either communication within that meeting or a more specific meeting with perhaps a reduced number of people such that we could pursue an issue in more detail.

End 8

WRB 9 fls

#9 WRBwbl

Q. Mr. Howe, how is it Mr. Dietz conducts this meeting and not you?

A. (Witness Howe) Mr. Dietz already had this meeting under way when I arrived at Brunswick. I felt he was handling it in a very competent manner, and I saw no need to make a change.

MR. ROACH: Mr. Chairman, could we take about a five-minute recess? We've got some updated information about the hurricane, and we'd like to kind of assess where we are.

JUDGE KELLEY: Surely.

11:51 (Whereupon a brief recess was taken.)

JUDGE KELLEY: Back on the record.

MR. ROACH: Mr. Chairman, we are now informed that the hurricane is headed fairly directly toward Southport where the plant is located, and it is expected to arrive there about six o'clock tonight.

Given that fact, I think it is imperative that Mr. Dietz return to the plant. He may be able to give us a little better idea of what the situation is at the plant.

JUDGE KELLEY: Okay.

WITNESS DIETZ: I think your testimony, Mr. Roach, accurately summarized the status of the trajectory of the storm.

As I indicated earlier, we commenced preparations for the hurricane this past week-end, based on the high

WRBwb2

probability of landfall, I would like to return to the site. We will commence, probably within a few hours, formal activation of our technical support center.

JUDGE KELLEY: Well, I think, obviously, you need to go.

How about you, Mr. Howe?

WITNESS HOWE: I can remain here. My main function would be doing restoration. And I arranged the evacuation of my family early this morning. So they have left the beach and are heading to Raleigh.

I would be willing to carry on the testimonial duties for both Mr. Dietz and myself, if it is agreeable to the Board.

JUDGE KELLEY: Well, let me ask Mr. Runkle: Where are you, Mr. Runkle, approximately, in questions for these gentlemen?

MR. RUNKLE: I probably will go on questioning until about four o'clock today, which will allow time for redirect and Board questions, and to be finished with this panel today.

In reviewing the questions briefly over the break, I feel confident that Mr. Howe can answer almost all the questions.

What I would propose is that if there is a question that he cannot answer, that this question be submitted to Mr. Dietz in writing. I don't foresee that at this point,

WRBwb3

but that's my proposal.

MR. ROACH: That's fine, your Honor.

MR. BARTH: We would agree, your Honor.

JUDGE KELLEY: Okay. Well, Mr. Dietz, I know you want to get going Thank you very much.

You may be getting a written question at a later point, as you just heard. We appreciate your coming and your responsiveness and your performance on the stand.

Thank you very much. We wish you luck on your trip to the plant, and when you get there.

(Witness Dietz excused.)

MR. ROACH: Your Honor, could I ask one more indulgence? If we could break now for lunch that would give Mr. Howe and Mr. Dietz a chance to confer for a few minutes before Mr. Dietz goes back to the plant, and to make sure they're coordinated as to whatever Mr. Dietz may want to do.

JUDGE KELLEY: Do you want to do that?

MR. RUNKLE: That's convenient.

WITNESS HOWE: I have what I need now, Mr. Roach, if you would like to proceed.

MR. ROACH: I was just saying it would be helpful to break now for lunch, and that would give you and Mr. Dietz a chance to confer before he leaves to go to the plant.

JUDGE KELLEY: If you want to do that, go ahead.

WRBwb4

It's all right. We can quit for lunch just as well now as later, I think.

All right; we'll be back at one o'clock.

(Whereupon, at 12:04 p.m., the hearing in the above-entitled matter was recessed, to reconvene at 1:00 o'clock p.m.)

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#10

AFTERNOON SESSION

(1:10 p.m.)

JUDGE KELLEY: Back on the record.

Whereupon,

PATRICK W. HOWE

resumed the stand, and having been previously duly sworn, was examined and testified as follows:

JUDGE KELLEY: Mr. Runkle will be resuming his cross examination of Mr. Howe.

MR. RUNKLE: During lunch, the court reporter brought to my attention that the way we had been identifying different of the exhibits is not suitable -- was creating problems and everything.

JUDGE KELLEY: What's the problem?

MR RUNKLE: Particularly JI 26, which I had withdrawn. It is now on the record that there is a JI 26. It had never been identified before it was withdrawn.

JUDGE KELLEY: I suppose as we go along, we can try to be little more careful about offering for identification and offering for admission and so on. If that's the main problem I guess we can live with that. Since the record does show that it got withdrawn.

MRS. FLYNN: Excuse me, Mr. Chairman, there was another one of those, Applicant's Exhibits 2 and 3 which I offered yesterday are not recognized in the transcript of

AGB/pp 2

yesterday as having been received into evidence.

JUDGE KELLEY: 2 and 3 are what again?

MRS. FLYNN: They are the executive summary of the CP&L June 1984 report of the North Carolina Utilities Commission concerning the Cresap audit and three pages of the June 1983 report to the Utilities Commission by CP&L also on the Cresap audit.

MR. ROACH: Excuse me, Mr. Chairman. I mentioned that to the reporter and he said he'd issue a corrected page. I told him what page they were admitted on.

MRS. FLYNN: All right. Thank you.

JUDGE KELLEY: Okay. Anything else along this line?

MR. RUNKLE: It had been my intent when I refer to a document and state that had been passed out to all parties and identified as JI whatever, that that was for the purpose of identification.

JUDGE KELLEY: Right. That's my normal understanding. And then I expect at a later point, perhaps at the end of a certain line of questioning, you would offer it into evidence and then there would be a ruling on its admissibility.

MR. RUNKLE: Yes, sir. I had just done a shorthand. I think we all understood it here. But I would like the record to reflect that that -- at that time that's what it was identified.

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JUDGE KELLEY: And also withdrawn?

MR. RUNKLE: 26, but all of them I had done that same practice.

JUDGE KELLEY: Okay, fine.

xxxxxxxxxx

CROSS EXAMINATION (Continued)

BY MR. RUNKLE:

Q Mr. Howe, on page 13 of your prefile testimony in the top paragraph, you discuss a required tour by shift foreman. How often is this tour performed?

A (Witness Howe) The shift if 8 hours, so once every 8 hours.

Q Is that just for the shift foreman to make that tour?

A No, there are a number of other tours that would be going on, inspections that would be going on. What this really describes is within the plant we want to make sure the shift foreman are out observing, checking on activities, being cognizant of conditions at the plant through their own eyes. And so we've established this process by which within each 8 hours the shift foreman makes his tour. He may make a number of other trips out into the plant at that time. However, in this case he goes, he performs a visual inspection through the plant, and documents his activities during that tour.

Q And you do not take these tours with

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the shift foreman, do you?

A I have on some occasions. I try to visit the plant into the power lock itself as frequently as possible.

Q How often would that be, once a week?

A No, probably three or four times a week I would go out and tour through the plant.

Q And during these tours that you make of the plant, can workers bring quality concerns directly to you?

A Yes.

Q What actions would you take if a worker brought a quality concern to you?

A I think the first action I would take is to hear him out. Listen to his concern. Ask questions if I needed application on any points of his concern. Make sure I understood what his concern was. Then I would take this up through the normal plant management. And feedback to him, make sure that he understood the resolution of his concern.

Q If it was a concern that might properly be handled by QA, would you bring this concern to them?

A Yes, I use the term plant management. In that case, I was thinking of it in a broader context, Mr. Runkle. I would talk to QA, I would talk to Mr. Dietz. Perhaps if it were in maintenance, I would stop and talk with the manager of maintenance about it, make sure that all

affected parties were involved with the resolution of the problem.

Q Are you available at other times besides touring the plant for workers to bring quality concerns to you?

A Yes. I am stationed on site, and it's well-known where my office is and if they are not finding satisfaction of their concerns through the normal land management channels they're certainly at liberty to come to my office. I do attend a variety of meetings such as the all-shift meeting, which is the meeting held of the off-going operating shift, in which we have open discussion of situations. I attend the meeting of the fire protection group. A number of the groups that have end of shift-type meetings. And at times problems are brought to my attention at both meetings.

Q Has a worker ever come up to you when you're on tour with a quality concern?

A Not specifically that I can remember in that connotation of quality.

Q It was Mr. Banks on the first panel, had described a fairly recently implemented quality check program at Harris. Are you familiar with that program?

A I have some familiarity with it but not in detail.

Q Does Brunswick have a similar program?

AGB/pp 6

A No, sir, we do not.

Q Have you previously or are you considering implementing a similar program at the Brunswick plant?

A Based on our present status it seems that those persons who do have concerns finds resolutions to those concerns without the formality of such a program.

Q And that would be either going through plant management and QA --

A QA and also there is another avenue of appeal. They're fully limited to discuss a concern with a resident NRC inspectors.

Q Do the workers at the plant use these different avenues of raising their quality concerns?

A It has been my observation they have, yes.

Q What contact do you have with the NRC inspectors?

A They attend our morning meeting and I have contact with them on that occasion and I try to drop by periodically just to chat with the senior resident inspector with any observations, concerns that he may have. We try to maintain an effective working relationship and open communications.

I also have in-person contacts and telephonic contacts with Mr. Bemis, the section chief, probably once or twice a week.

Q Do they bring concerns to the daily morning

meeting?

A They have, yes. They may have a problem or a concern as to an interpretation of a situation. And they may express their concern about that and we will then have a follow-up meeting after the morning meeting, since it is typically not an action-type meeting, but an informational-type meeting. We'll convene with the resident and seek resolution of this.

Q Can you estimate how frequently an NRC inspector would bring a concern to the daily meeting?

A I would say they're not a frequent occurrence. I couldn't put any numerical value on that really.

Q If there was a violation at the Brusnwick plant how would you first hear about it?

A I would probably hear about it through Mr. Dietz. He would notify me that we had incurred a violation. Another manner in which I would hear about it is if it were an audit performed by an offsite activity of the NRC. I attend as many of the exit meetings as practical. If I'm onsite I make a point of attending those. And which time the results of the audit are reviewed, plant management and others, and I would become aware of it there if I hadn't already heard of it earlier through another channel.

Q Would the NRC inspector go directly to Mr. Dietz and inform him that a violation had occurred?

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A He would be at liberty to do so. The normal practice is if they perform an audit, there is a scheduled exit critique. At which time they present their findings. They describe the scope of their assessment, comment on any strong points, make any observations with respect to any concerns and then identify whether or not there is in fact any formal findings coming out of this audit.

Q And some of the formal findings would be the violations?

A Yes.

Q At several points in your prefile testimony, you speak in terms of standards of performance and staff morale. How do you quantify these kind of things?

A I think standards of excellence are somewhat difficulty to quantify. As we discussed earlier today, you can use various indexes of performance. I think the thrust of this is that we have tried and I think that we have had success in establishing a search for excellence at Brunswick.

We are not unmindful that Brunswick's past performance left much to be desired. And we set forth on a strong program to establish discipline of operations, a search for excellence. We encourage people to take that extra step, to go the extra mile in their performance of their duties. To try to find defects and deficiences and

correct those, both mechanical and procedurally.

And I think that perhaps to go back to capacity factors for a moment, as an index of performance, the fact that we're now operating at 83 percent compared to some of our past annual performances, shows that our search for excellence is succeeding.

I think we had a 44 percent reduction in NRC violations. We've had a substantial reduction in radiation exposure, radwaste generation. A variety of indexes that could be used confirm my opinion that we have in fact had a substantial improvement in the search for excellence and in the quality of our performance.

Q How is this search for excellence program conveyed to the line worker?

A Through meetings. In other words, either I or Mr. Dietz or the respective discipline manager will expound upon this theme. I meet on a monthly basis with the entire plant management staff that happen to be on the day shift. We are a shift operation, around the clock, so it always means some people are not there.

At that time we review the events of the past month, events that are forthcoming. And we will hold discussions on such matters as our quest for excellence, how well we're doing, where we feel the area is in need of improvement. I think a lot of it is an attitudinal

AGB/pp 10

matter. To make sure that people do seek out to do the best.

Q Have any of the workers at Brunswick been disciplined for quality deficiencies?

MR. BARTH: Could we get an understanding of what Counsel means by quality of deficiencies so we can understand the record?

JUDGE KELLEY: Such as a violation of NRC regulation?

BY MR. RUNKLE:

Q That or your NCRs?

A We have administered disciplinary action at the site for failure to follow procedures.

Q And who, in the management at Brunswick, makes the decision to discipline a worker over quality deficiencies, violations of NRC regs?

A Typically, the recommendation will come from the individual's foreman, progress up through the chain of command and ultimately is either concurred in or rejected by me.

Q Have any of the personnel at Brunswick on the managerial level or above ever been disciplined for these quality deficiencies, violations of regulations, et cetera?

A Would you define what demarcation you establish the managerial level?

AGB/pp 11

Q Looking at your Attachment Number 1, what would be the managers that report directly to you, the managers that report to Mr. Dietz, and also the various directors -- anybody on Attachment 1.

A There are several that have been severely chastised for situations which I did not find acceptable. Severely chastised with a disciplinary action where they are all shift foreman who had letters in their file and time off without pay.

Q And when you say chastised, is that a -- in your verbal meetings with these people?

A I would have a session with the individual and review the situation I way concerned about and I strongly expressed by dissatisfaction. And indicate to him that approach to a given situation was totally unsatisfactory and unacceptable to me. And should not again be repeated.

Q And if the violation or what have you is severe enough then you would take other disciplinary actions, a letter to the file and that kind of thing?

A If it were, I haven't encountered that thus far.

Q Okay. Earlier we had talked about onsite QA -- their attendance at the morning meetings and also part of the Brunswick management team. Do you first become aware of QA problems through the morning management meetings.

A I think there are multiple ways in which I

become aware of QA problems. One would be through the exit critiques that I spoke of, when corporate QA were to perform an audit onsite. I would attend that exit. I have heard about them through the QA surveillance reports, which I am on distribution for and review those and detect any concerns that they may have. I would learn about them through personal contact with Mr. Larry Jones, who is the Director of QA, QC onsite or his immediate lieutenants or others. I could become aware of them through the morning meeting. I could become aware of them through my own chain of command.

Q Does Mr Banks in corporate QA ever bring any QA concerns to you in your contacts with him?

A Yes. We've had some discussions principally on interpretations, matters of that sort, scope of program. Mr. Banks and I formally interface on a monthly basis but have many more interfacings than that, either by telephone or in person.

Q If you and corporate QA have a disagreement of some kind, would it be Mr. Utley who makes the final decision?

A Yes, I think it is. Mr. Banks and I cannot resolve the matter between us, then our court of appeals would be Mr. Utley.

Q And he would make the final resolution on that?

AGB/pp 13

A I would assume so. Perhaps he might want consultation with others, but he is both of our superiors.

Q On page 5 of your prefile testimony, you speak near the top of the page about the 1982 reorganization of Brunswick when you were make project vice-president. What other changes happened at that time in Brunswick?

A At that specific moment that was the only change. There have been some subsequent expansions of the organization. I've brought in some additional personnel. I've established two additional sections which are identified in my prefile testimony as the outage management section and the site planning and control section.

Q In the -- we'll come to that in a minute. In the 1982 reorganization, during that time period, your assignment to be project vice-president was the only change in management at Brunswick, was it not?

A To the best of my recollection, that's correct.

Q In 1984, which is discussed further on down the page, you set up the two sections of outage management section and site planning and control section, did you not?

A That's correct.

Q What does the outage management section do?

A Outage management section is a fulltime organization devoted to the planning, scheduling, monitoring and control of outages. It is divided into three organizational units,

AGB/pp 14

one is the planning and scheduling, which does the sequencing, monitoring of the sequencing, any adjustments to schedule that may be necessitated.

The second element is the outage project management organization and this function has assigned to each outage project an identified responsible project manager who is held accountable for the orchestration and the successful implementation of that particular project as part of the outage.

The third organizational unit is the outage documentation and reporting function which deals principally with the flow of paperwork associated with the outage in the form of turnover packages, reviews of documents, assembling of documents, reviewed through the QA organization and ultimately into the vault, what is normally referred to as turnover packages.

These individuals are assigned full time to these functions and I think the evidence of our success in this undertaking is represented by a current outage.

Q And when, in 1984, was this section first established.

A I believe formally it was established in January of 1984. It had been in formative stages for four or five months earlier than that while I was trying to work out how this would function, some of the mechanical details of

controlling and outage and identifying key individuals which I could move into that organization because of their unique expertise or capabilities.

Q And briefly, what are the duties of site planning and control?

A Site planning and control has four specific functions. One of which is the long range planning, scheduling activity. There are charged with the responsibility of developing a five-year plan that lay out the various modifications and activities that we have to perform over the next five years, in starting to develop the outage frequency for those activities. And also they're responsible for a program which we call IPBS, which is integrated planning, scheduling and budget system, which is a feed into the establishment of the budgeting chair.

A second function they have is the industrial engineering function. It performs classical industrial engineering-type activities, facilities design, work force management systems, productivity management systems, things of that sort.

We have a cost control and financial analysis section that is charged with cost control, processing and invoices, the formulation of the budget and preparation of financial analysis statements.

AGB/pp 16

End #11

B fls

We have a resource management function which maintains a surveillance on the effective use of resources, both manpower and otherwise and perform special assignments. They tend to function to a certain degree as a staff function to me.

Q As Vice-President of the Brunswick nuclear project you have responsibilities for both safely operating the nuclear power plant plus financial and budgeting responsibilities, do you not?

A Yes.

AGB#12
agb/agbl1

Q. Do you have an estimate of what percentage of your time is spent on safety as opposed to that spent on the financial?

A. I think the large majority of my activities are either directly or indirectly directed toward the safety of the nuclear power plant. I would say the budgeting and financial control do not influence the safety decision I make.

Q. But in your analysis of an outage or a modification or whatever, you would also have considerations about budgetary aspects, would you not?

A. There would obviously be some restraints on that. However in the prioritization of those items which go into a budget or go into an outage scope, those related to regulatory matters and safety take the highest priority; the second order of magnitude would be those dealing with reliability and improvement in the performance of the unit from a non-safety consideration.

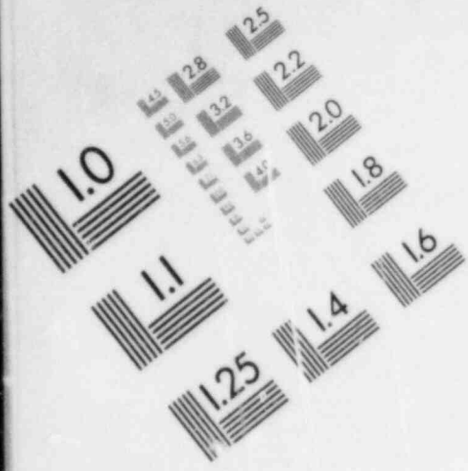
Q. I would like to ask you a couple of questions about staffing levels at Brunswick.

How large a staff does Brunswick have right now?

A. Are you referring to the Brunswick nuclear project department?

Q. Yes, sir.

A. Our authorized table of organization is 1230



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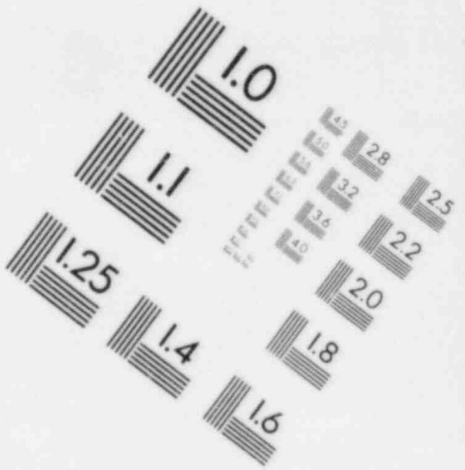

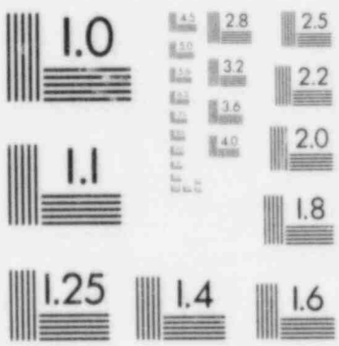

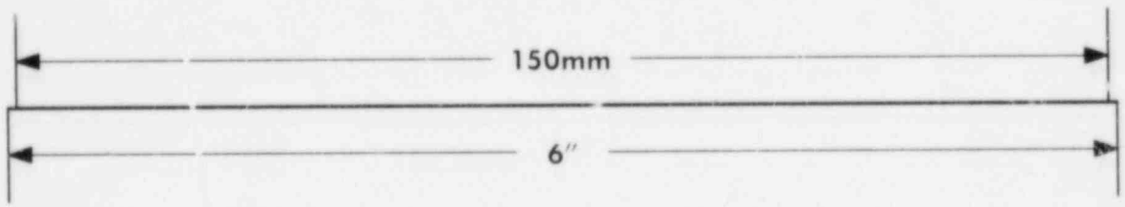

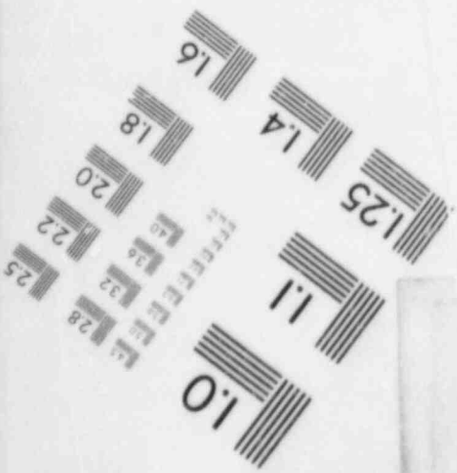

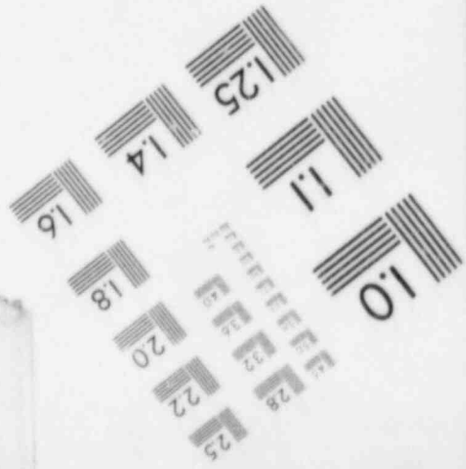

agb/agb2

positions.

Q. And that's the authorized level.

How many personnel do you have at this time?

A. I think that that's about 95 percent full. There is always a certain amount of turnover. Our attrition rate has dropped down to, I think it's about 3 percent.

Q. So we could safely say that --

A. Probably about 1180, -85, something of that sort.

Q. In the range around 1200, say.

A. Something of that sort, yes.

Q. And of those, how many report to the plant general manager?

A. I believe approximately 862.

Q. And the rest of those would be in engineering, construction, outage, management and site planning and control?

A. Yes, that's correct.

Q. And these would be all CP&L employees?

A. That's correct.

Q. How many contract personnel are there now at Brunswick?

A. That would vary depending on the nature of the activities going on at the time. During the maximum

agb/agb3

manpower loading for an outage, there may be as many as 1500 to 1800 outside contract personnel. That number will drop very rapidly; as we are coming into the latter phases of the outage now, I think we have gone from something like 1000 construction contract personnel down to approximately 200.

Q. Could you place before you what has been previously identified as JI 16? which has

A. Which one is that?

Q. It's Attachment 124, it's the two pages with the columns....

A. I don't think I have a copy of that.

(Document handed to the witness.)

Q. Well just review that one right now.

Sir, when you had previously stated that there was 862 employees reporting to the plant general manager, is that reflected in that chart before you?

A. Yes, it's under the column July 1983, it shows 862.

Q. And the figure for the present date is roughly equivalent?

A. I'm sorry, I didn't quite understand your question.

Q. That was in July '83.

As of September '84, is it roughly equivalent to that?

agb/agb41

A. Yes, it is.

Q. And is the breakdown of the employees in the different categories correct to the best of your knowledge?

A. In round figures they are in the same ballpark. I have some differences here on the order of five to ten positions, but in generalities these numbers for 1983 would tend to compare.

There has been some redistribution within the organization since July of '83; that causes some difference in the numbers but the totals seem to match pretty close.

Q. It's not a substantial difference then?

A. No, I wouldn't describe it as substantial.

Q. Has there been any changes in the top column which is managers?

On JI 16, it has five managers for July '83, does it not?

A. Now this is referring -- as you notice on the caption of the staffing levels, Brunswick plant --

Q. Yes.

A. -- this is referring to those activities under the direct supervision of Mr. Dietz as opposed to the project....

It indicates five....

(Pause.)

agb/agb51

There have been some additions to that apparently since July of '83. I show that there are, including Mr. Dietz, eight management positions, one of which is a director level which is step below the manager level.

Q. And that would be reflected in your Attachment Number 1 to your prefiled testimony?

A. Yes.

MR. RUNKLE: At this time I would like to move JI 16 into evidence.

JUDGE KELLEY: JI 16 is admitted.

(Whereupon, the document previously marked for identification as Exhibit JI 16 was received in evidence.)

BY MR. RUNKLE:

Q. Sir, what contact do you have with the contract personnel at the plant?

MR. ROACH: I object to the question. That's a fairly ambiguous question. Do you want to ask him something a little more specific perhaps?

If he wants to ask --

MR. RUNKLE: I'll withdraw the question.

JUDGE KELLEY: Withdrawn.

Go ahead.

AGB/pp 1

BY MR. RUNKLE:

Q Sir, do you have regular meetings with managers of the contract personnel?

A I have periodic meetings. I wouldn't call them regular meetings at some defined frequency. These are in my options, I would meet with management of a particular contractor.

Q And that would be to discuss the job that needed to be done?

A To discuss the job that needs to be done, maybe staffing levels, availability of resources, things of this sort.

Q If a contract personnel -- if one of the staff of the contractor had a quality -- wanted to bring -- had a quality concern, how would you find out about it?

A Bear in mind that these contract personnel work under the supervision and management of CP&L personnel so that the same channels that I described earlier would be available to those situations also.

Q And that would be through plant management --

A Through plant management, through QA, through NRC or direct contact to me.

Q Of the 862 operating personnel reporting to the plant general manager, how many of these would be exposed to radiation in a years time?

AGB/pp 2

A I think it's a fundamental fact of physics that we're all exposed to radiation on a continuing basis. If you could redefine your question -- I'm not trying to be facetious -- but to ask how many people are exposed to radiation, all of us sitting here in this room are being exposed to radiation right now. If you could quantify it or expound it a bit more, I'm not trying to be evasive.

Q Certainly. How many of these 868 -- 862 personnel -- are regularly monitored for exposure greater than background levels at the Brunswick plant?

A All personnel who enter into what is referred to as the protected area, are obliged to wear personnel dosimetry devices both in the form of pocket self-reading dosimeters and thermoluminescent dosimeters.

Q And do you have a number of how many of these there would be?

A Of the plant population there could well be 80 percent or more because of other offices being located within the protected area, other activities not directly involved in the direct operation of the plant, to supporting activities located inside the protected area. Therefore, anyone entering is obliged to maintain personnel dosimetry.

Q And this 80 percent number, would that have stayed fairly constant over the last several years of the plant operation?

AGB/pp 3

A No, that number has increased over the last several years of plant operation in that the population of the plant has grown and in so doing we have placed trailers inside the protected area because of lack of space outside the protected area, and as a consequence more people are now being reported on our annual radiation exposure records.

Q In 1981, what percentage of the personnel reporting to the plant general manager were monitored for radiation above background levels at the Brunswick plant?

A In 1981. the total number of persons monitored at the Brunswick in 1981 was 5,129. That means obviously that there were more people visiting the site, you see. So anyone again who enters that power block in a protected area is monitored. So this may represent contract personnel coming in, it may represent visitors, it may represent NRC personnel coming to visit the site, any variety of people who would have access to that area.

#13 WRB fls.

WRB13/eb1
fls AGB 12

Q In JI-16 it states that for 1981 there were 521 CP&L operating personnel reporting to the plant general manager. What percentage of those were being monitored for radiation?

A I really couldn't break out that number. All I can say is again any of them that went into the protected area would have been monitored. How many of those went into the protected area I don't have a record of that.

I can tell you the number of people that were monitored in 1981, and I can tell you some of the distributions of that, but as to whether they are plant personnel or non-plant personnel, that is not reflected in my records because what we're interested in is the exposure, not necessarily to an individual's permanent place of assignment.

Q ON page 16 of your prefiled testimony, in your Answer 17, you state that staffing levels at the plant were always adequate to insure safe operation of that plant.

A Yes.

Q Excuse me?

A I said Yes.

Q I don't understand this next sentence. Can you explain this next sentence to me?

A Would you like for me to read the next sentence?

Q Can you just summarize what the next sentence says?

WRB/eb2

A It says looking at our past experience, however, we do recognize times when the work load of the plant, due to the increasing regulatory requirements and our efforts to implement reliability improvement modifications, has been greater than our ability to accomplish that work in the time frame that we would have considered most desirable.

The thrust of that sentence says, for example, in some cases where we were performing a modification, if perhaps we had had additional resources, we may have completed that in a shorter time frame.

I don't think there is a correlation between the safe operation and the completion of work in the time frame that we would consider most desirable. I don't think the two are related there.

Q Okay.

A It is not intended that they be related.

Q Okay, that clarifies it. I just wasn't sure that was the distinction you were making.

A I understand.

Q On page 17 of your prefiled testimony, in Question 19 -- in your answer to Question 19 you state that in late '79, early 1980, you realized that the health physics program was not adequate.

A Yes, that it needed improvement.

Q What were the specific incidents that brought this

WRB/eb3

to your attention?

A I wasn't assigned at Brunswick until late '79 or early '80, Mr. Runkle.

It would be my opinion that perhaps the observations of our corporate health physics organization or corporate nuclear safety or others indicated that there were areas there for improvement.

Q And this might be reflected in such NRC documents as the SALP reports?

A It could very well have been, yes. I think that would be one possible index.

Q If you can turn to Attachment 2 of your prefiled testimony, and also page 18, there is a discrepany there. Let me bring it to your attention.

When you talk in terms of Dr. Oliver's qualifications on Attachment 2 it says he has a Ph. D. in environmental engineering.

A Thank you for calling that to our attention.

I am not sure whether it is environmental engineering with a minor in radiological hygiene or a degree in radiological hygiene with a minor in environmental engineering.

I apologize. I do know he holds a doctorate.

Q And also on Attachment 2, does Mr. Cheatham have a degree?

WRB/eb4

A No, Mr. Cheatham does not.

Q At page 20 of your prefiled testimony you discuss a series of changes that were made in operations at the Brunswick plant, do you not?

A Yes.

Q And these different changes have culminated in what you refer to as the six-shift rotational concept.

A Amongst other things, yes.

Q Can you briefly describe the concept of the six-shift rotational concept?

A Recognizing that there was a reported need for a substantial amount of training and retraining, both regulatory-required and those programs which we ourselves have initiated and continue to implement, it is distracting from the effective operation of the plant to try to divert people on shift when they are performing their operational duties to have them go through this training activity.

So rather than having a conventional four- or five-shift rotating plan, we have established a six shift which then allows these people to go through a six-shift rotation, the sixth week of which on their shift rotation is dedicated exclusively to training.

Q And on each shift in this six-shift rotation, how many employees are there on that shift?

A I'm not sure which the shift size is right off-hand.

WRB/eb5

I may be able to derive a number for that.

(Pause.)

It would be greater than 20 individuals but less than 30 on the operations shift.

Q And so the six shifts would have between-- You would have 120 to 180 operating personnel?

A It would be about 120, which is about where I think we are. That was a rough estimate. I was just trying to look at some of these numbers. I don't have a precise number on that.

Q And of the 20 to 30 on each shift, how many would be SRO licensed?

A SROs, probably-- There would be five. The tech spec requirement is three.

Q And you would use those SRO licensed personnel to train the other personnel on that sixth week when they were in training, would you not?

A We would use the staff in the Training Section on site. The SROs would probably be recepients of training rather than providers of training although in some cases you may use some of their experiences in the program, but we have a training organization on site that would provide these trainings.

Q In your prefiled testimony you discuss on page 24 reductions that have been achieved in the generation of

WRB/eb6

radwaste, do you not?

A Yes.

Q At what time did the management of Brunswick begin a program to reduce the amount of radwaste?

A I think the management of Brunswick has always been sensitive to the quantity of radwaste being generated, and has always sought to minimize this.

As far as a direct concerted effort, I think that has always been the intent. You have to bear in mind that the amount of radwaste generated is somewhat proportional to the activities going on on-site.

I believe in 1980, however, there was a very substantial effort mounted to reduce the amount of radwaste generated. This took a number of different forms, and also it's a reflection of I think improved performance in areas such as the reactor water cleanup units and things of that sort, so that the quantity of resins having been consumed is substantially less.

There were a number of techniques that were put into practice with the objective of reducing radwaste generation.

Q Is one of these a system for tracking the disposal of radwaste?

A I'm not sure I understand that question.

Q Do you monitor what is done with the radwaste when

WRB/eb7

it is disposed of?

A Yes. Very detailed records are maintained of our shipments to the burial ground in Barnwell, South Carolina.

Q And when were these detailed records initiated?

A I'm sure that as long as they have disposed of waste at Barnwell, this has been a requirement, to maintain such records and to track the shipments.

Q Did CP&L ever violate NRC regulations in relation to the disposal of radwaste?

A I believe there was a episode in 1980, to the best of my recollection, in which there were some contaminated material inadvertently released to a sanitary landfill in Brunswick County.

Q And do you recall if that resulted in a civil penalty?

A I believe it did, but again I wasn't there in 1980, but I believe that was the case.

Q What has been-- In the last two years, what has been the NRC Staff involvement in your program to reduce radwaste generation?

A I would not say that NRC has had any direct involvement in our program. That is not one of their functions.

They have assessed and appraised our program, but they do not become directly involved in it. That is a

WRB/eb8

licensee's obligation and responsibility. I think that their assessment of our program has been that we are very commendable. We have taken some very strong measures to reduce the volume of generation.

That reduction of approximately cutting our volume in half between 1980 and 1983 is I think a rather major achievement, particularly when viewed against the backdrop of the extensive amount of modification outages that were going on the time which typically tend to generate large quantities of radwaste, building materials, and that sort of thing.

In fact, in the area of liquid radwaste, Mr. James O'Reilly, Regional Administrative of Region II, has even suggested to our Supervisor of Radwaste that perhaps he might care to write an article for Power magazine or something, when he was there on a visit, because of the remarkable and very dramatic improvements that he had effected in our liquid radwaste program.

Q Was this recently?

A He was down in -- I believe it was January or February. He visited the site sometime in that time frame.

Q Does he routinely visit the site?

A No, I would not describe his visits as routine. He has made visits there. On this occasion he came to present the certificates of completion for 15 reactor operators who

WRB/eb9

had undergone the first NRC-administered requalification program and who had set an outstanding percentage of passage, 100 percent, and with extremely high grade marks. And Mr. O'Reilly was kind enough to come and present the license personally and offer his personal congratuations to these operators.

Q In the SRO requalification, did those people know that they were going to be tested?

A The Commission did not announce prior to administering the examination who would be tested. We put all of our people through a preparatory program which we would for any requalification examination, and then the NRC selected those individuals that they wished to administer the examination to.

So the individual nor CP&L management had any advance notice of who would be tested.

Q When did CP&L initiate this preparatory program?

A We had always had a preparatory program. Part of your retraining is to go through these refresher programs and so forth.

I think the distinction that can be made here was heretofore the NRC approved the Applicants' requalification program and the Licensee administered the program. With this change in policy and practice on the part of the Commission, they provided the examination and administered the examination

WRB/eb10

to these requal individuals.

Q Do you have before you a copy of the third SALP report which has previously been admitted into evidence as JI --

JUDGE KELLEY: Mr. Runkle, if we are going to venture into SALPs, should we have a cup of coffee first?

MR. RUNKLE: If I could just finish briefly on this SRO requalification, I think I could do that in a couple of minutes.

JUDGE KELLEY: Surely. Go ahead.

MR. RUNKLE: Does anybody have the number of the SALP III?

MR. BARTH: Number 21.

MR.RUNKLE: Thank you, sir.

End WRB13

THE WITNESS: No, I don't, Mr. Runkle.

B14 fls

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#14

BY MR. RUNKLE:

Q If you will turn to page 10 of the third SALP report, JI 21.

A I'm there.

Q Near the top of the page it discusses the results of a prior testing program for the SROs does it not?

A Yes.

Q What were the passing grades at that time?

A During the previous review period a passing grade was recorded for 18 of the 27 reactor-operator candidates. The examinations conducted during this examination period resulted in only three of nine senior reactor-operators and 11 of 25 reactor-operator candidates receiving passing grades.

Q And that was in the program that CP&L administered?

A And I'd have to read the rest of it. It just doesn't indicate that these were requals. This could be initial licensing that would be administered by the NRC.

Q Okay. So the initial qualifications is done by NRC?

A Yes.

Q And up until the last time the requalification was done by CP&L?

A Under an NRC approved program, yes.

Q When was the last time that CP&L qualified SROs?

WRB/pp 2

A I'm trying to check on some notes here, Mr. Runkle, just a second.

(Pause.)

There was what is referred to as a hot license class administered in January of '84 to our reactor-operators and senior reactor-operators.

Q And what was the passing grade at that time.

A For our ROs the passing rate was a 77 percent passed with an average score of 85.7. For the SROs there was an 80 percent passing with an average score of 83.

That's for initial license.

MR. RUNKLE: Your Honor, I have no other questions in this area. It would be a good time for a break.

JUDGE KELLEY: Fine. Let's take 10 minutes or so.

2:13 p.m.

(Break)

JUDGE KELLEY: Back on the record. Let's resume cross examination.

BY MR. RUNKLE:

Q Sir, what was your involvement in preparing the Brunswick improvement plan?

A I guess I was the chief architect.

Q And you have been responsible for implementing that plan?

A Yes, sir.

WRB/pp 3

Q What was the NRC involvement in the preparation of the Brunswick improvement plan?

A They were not directly involved in the preparation of the Brunswick improvement program. However, obviously it was sensitive to some of the concerns which they had expressed and we reflected responsiveness to those concerns as part of the program we developed.

Q And the major objectives of the Brunswick improvement program wasn't one of them long term planning?

A I think it did address that in a fashion and we are engaged in long range planning.

The seven major objectives of the program are set forth, I think, in my prepared testimony.

Q On page 27?

A They read as follows: "Ensure full and timely compliance and all --

Q Excuse me. If they're on page 27, I don't think you need to read them.

A Okay, fine.

Q As to the first of these seven major objectives: "Ensure full and timely compliance with all surveillance requirements, regulatory requirements, and the like" was this not a corporate goal before?

A Yes, of course. We were obliged and fully support the idea of complying with all regulatory requirements,

WRB/pp 4

regulatory commitments, and performing all surveillance. The subset under this goes much further into detail when we broke this program out into approximately 119 specific objectives.

Out of this first objective was the establishment of the surveillance tracking and scheduling program which Mr. Dietz described this morning.

In many cases, these activities were reinforced through the Brunswick improvement program. In some cases there were new programs established.

Q Do you agree with the NRC's assessment in relation to the $600,000 civil penalty of programmatic breakdowns at Brunswick?

A No, I think there was some evidence of some programmatic breakdowns, yes.

Q You have reviewed their reports on the $600,000 civil penalty, have you not?

A Yes, I have.

Q Do you agree with their conclusions?

MR. BARTH: Could we have which conclusion, one at a time for the record, your Honor?

JUDGE KELLEY: I think that needs to be pinned down a little bit.

There's an exhibit, is there not, a rather thick one that has NRC paper in it on this -- are you referring to

WRB/pp 5

some particular of that?

MR. RUNKLE: Just the overall conclusions.

JUDGE KELLEY: Even so, I think we should look at the exhibit and get that nailed down unless you've memorized all the conclusions and you're ready to speak to them one by one.

A No, sir, I have not committed those to memory.

JUDGE KELLEY: Okay. Well, let's get that in. What's the exhibit number?

MR. RUNKLE: I'm not prepared to go through it and get each individual recommendation or conclusion.

JUDGE KELLEY: Don't misunderstand me. I'm not urging you to do so. I do think the question as phrased is unfairly broad.

BY MR. RUNKLE:

Q Mr. Howe, has the Brunswick improvement plan been fully implemented?

A Yes, it was fully implemented and was signed off by the Nuclear Regulatory Commission. We completed the program on December 30, 1983. However, some of the objectives and tasks are obviously continuing activities. But we complied with the confirmation of action order and this was confirmed subsequently by the NRC in a written communication.

Q An objective one in your testimony would be one of those ongoing objectives, would it not?

WRB/pp 6

A Yes.

Q On page 29 of your prefiled testimony, you discuss radiation exposure to staff, do you not?

A Yes.

Q And one of the primary programs at Brunswick to reduce radiation exposure to staff would be your ALARA program?

A The ALARA Program is a key element in our radiation exposure reduction program.

Q When you discuss about the annual exposure per individual at Brunswick having been decreased by 38 percent from 1980 to 1983, are you referring to all personnel which have been -- which are monitored for radiation above background level?

A All personnel who received a positive exposure.

Q And that would be CP&L personnel plus contract staff?

A Yes.

Q When did you begin your computerized radiation exposure record and tracking system?

A The development of it was started, I think back in about 1980. It's a fairly complex program and I think it became operational, some facets of it became operational, I believe, in '81.

Q Have you been able to set any goals for 1984 on

ho

WRB/pp 7

how much -- what percentage of reduction that you expect to obtain?

A We have set a cumulative Man-Rem exposure for 1984 of 3600 Man-Rem. Projections to date indicate that we will come in below that goal. On the favorable side.

Q And now many employees do you expect to be exposed to radiation in 1984?

A Are you speaking of just CP&L employees or CP&L employees plus contractor. Could you quantify that a bit, please, Mr. Runkle?

Q CP&L employees plus --

A Be exposed radiation at the Brunswick nuclear project?

Q Plus contract at the plant. All personnel at the plant.

A I may have some potential projections here.

I would imagine -- and this is strictly an estimate -- we may have some 6,000 people that would have passed through Brunswick and received an exposure. It does not necessary mean they are assigned to that project.

There is turnover in construction crafts, changing of craft-type personnel because of change in work scope as you move through the outage. As for being all personnel that have been issued a thermoluminescent dosimeter and a self-reading pocket dosimeter.

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Q Do you have an estimate on the number of person days, man days, of staff that potentially could be exposed to radiation?

A I've never heard radiation expressed in that term before.

Q All right. Can you place before you what has previously been identified and distributed to the different parties as JI 29?

(Joint Intervenors Exhibit 29 identified.)

A Will you identify that by something other than the number?

Q That is a short four-page I-E information notice.

A Just a second.

I have that before me.

Q Have you had the opportunity to review this document?

A Yes, I have.

Q As you will notice, we have put X's over those paragraphs that related to other power plants. And have just left that which is relevant to the Brunswick Steam Electric Plant.

JUDGE KELLEY: So, it's as if they were stricken, is that right?

MR. RUNKLE: Yes, sir.

MR. ROACH: Your Honor, we object to marking the document in this manner. I think the document should come in

WRB/pp 9

in its entirety if it comes in. Obviously the fact that similar problem may have occurred at other plants is something the board may want to consider.

JUDGE KELLEY: It's sort of a reverse of an objection we had the other day.

(Board conferring.)

Do the other parties prefer to have that material in? Do you care really?

MR. RUNKLE: I had put an X over it thinking they would object if I didn't. I'd be glad to have the whole thing in.

JUDGE KELLEY: And stipulate in the entire document, then? Thank you. There's no other objection to this particular document?

(No response.)
Okay. So ordered.

BY MR. RUNKLE:

Q Sir, do you regularly review I-E information notices?

A Yes, I do.

Q Did you review this one when it was first sent out?

A Shortly thereafter.

Q Were you aware of the problem before the I-E information notice was issued?

A Yes, I was.

Q How did the -- what was the problem described in

WRB/pp 10

this I-E information notice?

A Well, it discusses events which occurred at the Dresden Nuclear Power Station, at the Brunswick Steam Electric Plant, Indian Point Nuclear Unit 2, and discussed deliberate circumvertion of health physics procedures.

Q And what were these health physics procedures?

A Are you referring just to Brunswick or would you like to discuss --

Q Yes. What were these health physics procedures relating to the Brunswick Steam Electric plant?

A Well, there were several episodes referred to in this I-E bulletin. Falsification of documents by a contractor personnel where he attempted to circumvent the procedure regarding the use of his thermoluminescent dosimeter. The allegation was investigated both by ourselves and by the Nuclear Regulatory Commission. The individual had swapped badges and in an attempt to avoid showing radiation exposure on his badge, and he was -- two individuals were involved in this circumvention and both were contract personnel. Both were dismissed.

Q And do you know how long this practice took place?

A We could find no evidence of it having been a widespread practice of any duration.

Q And what kind of investigation did you make into finding out how widespread this practice was?

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A We made various comparisons of the dosimeter recordings from the pocket dosimeters and the TLDs. We examined the exposures of personnel in relationship to the locations that they had been. We instituted additional safeguards to avoid a repetition of this. We participated with NRC in a special investigation performed on November 3 and 4 by Mr. R. H. Albright of the Region II office of the NRC. And that was principally the activity.

Q In the changes in your procedures, which occurred after this problem came to your attention, wasn't one of them that each employee was to report directly to the dosimeter office?

A They report to the health physics checkpoint, yes.

Q And where is the health physics checkpoint located?

A It's located in close proximity to the entrance point into a high rad area or a high contamination area. What we refer to as the stepoff pad location.

Q And at that point is the TLD checked?

A Yes, the TLD is read and recorded -- I beg your pardon. The self-reading pocked dosimeter is read and recorded. The TLD requires a special process and system that would not be available right at each checkpoint.

Q And does the checkpoint retain the TLD or does it

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End #14
AGB fls.

go with the worker?

A It depends on whether he has completed his task and is leaving the area or not. Or whether he is, for example, a permanent employee.

For example, I have a permanently assigned TLD. There is a location when I am not using that but that TLD is located in the service building. I would be read at the checkpoint, my exposure recorded, and if I was leaving a protected area then I would deposit my pocket dosimeter in the assigned location on the rack.

B-15

Q In the discussion which is at the bottom on page 3 of this document, can you explain -- in the third sentence -- what else the health physics program is except for the protection of the personnel?

A The bottom of page 3.

Q Yes, sir.

A This document deals with Indian Point Nuclear Unit Number 2, is that what you're making reference to?

Q No, sir. The discussion.

WRB15/eb1

Does that discussion go with Indian Point?

A That discussion deals with Indian Point 2 on the bottom of page 3, sir, as I interpret it. It is right under Section 4, Indian Point Unit 2.

Q Okay.

It is my interpretation--

A It could be a little broader nature.

Q That was my interpretation, that it was a discussion of the problem at the various plants.

A I accept that.

JUDGE KELLEY: Can we pause and study the format for a minute?

MR. RUNKLE: Yes, sir.

(Pause.)

JUDGE KELLEY: The format is rather peculiar, it seems to me. The numbers in the heading don't make much sense. I don't know whether that last paragraph about discussion applies to everything that preceded it or not.

What do you think, Mr. Runkle?

MR. RUNKLE: That was my reading, that after the description of the events they had a discussion of the overall problem.

JUDGE KELLEY: If one went through it line by line I guess you could come to a pretty firm conclusion, but I haven't done that yet.

WRB/eb2

Mr. Runkle's view is that the last paragraph called "Discussion" applies to the whole thing preceding it.

Is that a view shared by the Applicants, or do you have any objection to his proceeding on that basis?

MR. ROACH: No, sir.

JUDGE KELLEY: Go ahead.

BY MR. RUNKLE:

Q In the "Discussion" which is on the bottom of page 3, the third sentence seems to imply that some contract personnel don't realize that the health physics program is provided for their protection.

What other reasons do you have a health physics program besides the protection of the personnel?

MR. BARTH: Sir, I don't think that it is relevant to the ability of Carolina Power and Light to operate the Harris facility to interpret a statement made by Inspection and Enforcement, Washington, D. C., by the Nuclear Regulatory Commission. Our statements in this thing really have very little to do with whether Carolina Power and Light can operate the Harris facility safely or not, your Honor, and I object to the question.

JUDGE KELLEY: Let me ask you, Mr. Barth. I should have asked you before.

Do you agree with the reading that the last paragraph labeled "Discussion" applies to the entire -- to

WRB/eb3

the preceding portion of the paper, to all the paper preceding that last paragraph?

MR. BARTH: It is our view that it does, your Honor. Mr. Jones from our Atlanta office is familiar with these things and it is his view also that this applies to all the plants mentioned, sir.

JUDGE KELLEY: Okay.

But you're objecting saying that this somehow is not relevant to the current contention. And why is that?

MR. BARTH: The NRC views that personal dosimetries provided for the protection of contract personnel as well as everybody else has nothing to do with whether or not Carolina Power and Light can operate the plant safely, the Harris facility, your Honor.

JUDGE KELLEY: Well, aren't the practices of Carolina Power and Light in operating Brunswick generally pertinent?

MR. BARTH: They are, your Honor, but that is not relevant to the question. The question before Mr. Howe was what other purposes could you have for this personal dosimetry. That is not a question the answer to which will contribute to the resolution of the material fact which is relevant to the contention before us, sir.

JUDGE KELLEY: Could you restate the question?

BY MR. RUNKLE:

WRB/eb4

Q What are the reasons you would have a health physics program except to protect the personnel?

JUDGE KELLEY: Well, I had a problem with it, too. It wasn't so much an objection. I thought that this meant that contractor personnel as opposed to regular personnel don't seem to realize that they are supposed to be protected by these programs.

You question suggests that somehow it is supposed to do something other than protect people. I don't know what that would be.

MR. RUNKLE: Well, I'll withdraw the question. It is not worth arguing over.

JUDGE KELLEY: Okay.

BY MR. RUNKLE:

Q Sir, how are contractor personnel made aware that health physics monitoring, TLDs, personal dosimeters, is for their own protection?

A All personnel, whether contractor or otherwise, who are going to enter the protected area, be badged with a TLD, a pocket dosimeter, are required to go through a program called "General Employee Training." This is a program of some two days, a large part of the training program of which is dedicated to health physics training.

They are required to pass a written examination to demonstrate competency in the reading of an instrument,

WRB/eb5

and the putting on and taking off of anticontamination clothing. There is considerable emphasis in the program on their responsibility in health physics, the purpose of the health physics program, the biological effects of ionizing radiation, and a number of other aspects of the health physics program.

Unless they successfully pass that program or written examination, they are not allowed to enter the protected area.

Q Are there any follow-ups to this initial program later on in their employment?

A You have to requalify each year.

Q And who supervises the contract personnel in relationship to their following of health physics procedures?

A CP&L supervision and CP&L health physics personnel.

Q Has CP&L set up a program to periodically spot-check to make sure that this is being followed?

A Yes, we have.

MR. RUNKLE: At this time I would like to introduce JI-29 into evidence.

JUDGE KELLEY: It is admitted.

(Whereupon, JI Exhibit 29, having been previously marked for identification, was received in evidence.)

xxxzx

WRB/eb6

BY MR. RUNKLE:

Q Sir, do you have knowledge as to the average man-rem for a two-unit BWR in plants across the country?

MR. BARTH: We don't understand the question. To whom, your Honor? You're talking about hundreds and hundreds of employees all over the place. And we are going to have to pin down whom is supposed to be the recepient of this dose so we can understand the question.

JUDGE KELLEY: ARe we talki ng about regulatory limits or actual average radiation.

MR. RUNKLE: The actual limit.

JUDGE KELLEY: Actual limit? I'm not sure what that means. Actual exposure?

MR. RUNKLE: Actual exposure.

JUDGE KELLEY: And the question is a sort of industry-wide average per year in rems?

MR. RUNKLE: Yes, per two-unit BWRs.

JUDGE KELLEY: Can you--

THE WITNESS: Not right off-hand, no, sir, I don't. It would depend a great deal on what activities were transpiring at that place as to whether there was any relevancy or comparability to those numbers.

JUDGE KELLEY: I don't know if the NRC compiles such a number. They get those reports; that's true.

MR. RUNKLE: It is referred to--

WRB/eb7

JUDGE KELLEY: There is such a number, Judge Bright tells me.

Go ahead.

BY MR. RUNKLE:

Q Sir, what was used before your ARTIMUS computer-based project management system to plan, monitor and analyze projects?

A We had a manual system and we also had a computer program, the title of which escapes me right at the moment now, T-2, or something of that sort, which was not as sophisticated as the ARTIMUS program.

JUDGE KELLEY: I might just mention on the last question, Judge Bright points out in the Environmental Impact Statement discussion of radiation, of course Brunswick is X years ago but it is the practice anyway to put in how much radiation you expect to have in the unit you're licensing.

Perhaps the Shearon Harris Impact Statement would be a source of a number of that sort.

MR. RUNKLE: I do have a source for a number, but I was not going to put it in. It wasn't worth--

JUDGE KELLEY: No, I just thought I would add that while we're talking about it.

Go ahead.

BY MR. RUNKLE:

Q Has the ARTIMUS computer system replaced most of

WRB/eb8

the manual system for planning, monitoring and analyzing projects?

MR. ROACH: Objection. We seem to be headed back into the outage plan and schedule and that sort of area. I think we talked about that before. It seems like we're heading away from anything that might be relevant, and I object generally to the question area.

JUDGE KELLEY: Do you have a response, Mr. Runkle?

MR. RUNKLE: I have been fairly closely tracking his prefiled testimony, and on page 29 he does talk about the specific management methods, and the top of page 30.

JUDGE KELLEY: I see that, yes.

Could you restate your question once more?

BY MR. RUNKLE:

Q Has the ARTEMUS computer system replaced the manual system for planning, monitoring and analyzing projects?

JUDGE KELLEY: Projects? Not outages? You're asking about projects?

MR. RUNKLE: Yes.

JUDGE KELLEY: Or are you talking about outage projects, if I can put it that way?

MR. RUNKLE: Well, in the prefiled testimony Mr. Howe uses the word "projects."

JUDGE KELLEY: All right. Well, it's in the prefiled. Go ahead. I will overrule the objection.

THE WITNESS: Principally it has, yes.

End WRB 15
AGB fls

BY MR. RUNKLE:

Q. And at the top of page 30 you make a statement that the ability to control projects is a real enhancement to safety, do you not?

A. Yes, I do.

Q. Before the ARTEMIS did CP&L lack the ability to control projects?

A. No, it did not, it did not lack. I call your attention to the word "enhancement."

Q. So the ARTEMIS would increase the control?

A. Yes.

Q. In the following line what do you mean by "probabilistic risk assessment capability."

A. A probabilistic risk assessment, or a PRA, is a mathematical treatment of the probability of multiple failures or simultaneous failures; it gives you an index as to the likelihood of an occurrence and the risk associated with such an occurrence.

Q. And is this also a computerized system?

A. It is both manual and computerized.

Q. And also on page 32 of your prefiled testimony you discuss what we had previously referred to as FACTS, the Facility Automated Commitment Tracking System.

A. Yes, that is discussed on page 32.

Q. How much reliance do you place on these

agb/agb2

computerized systems?

A. I find them a handy tool but I don't rely on them totally. We also have interactions with the NRC, we have monthly meetings with the NRC to discuss the status of commitments: they maintain their list, we maintain ours, we get together and compare them and make sure that we are in accord with what we owe them and, in turn, what they owe us.

Q. To the best of your knowledge, is their system computerized?

A. I think at least parts of it are, yes, I have seen them utilize computer printouts. There are also handwritten lists that are maintained by project managers which they use during the course of these discussions.

Q. Have you ever compared the two systems to determine how well they correlate?

A. We have only compared the output of the systems, not the computer programs and the mechanisms of it. I don't think any purpose would be served in that sort of comparison.

Q. How do the outputs of each system compare?

A. Favorably.

MR. RUNKLE: Your Honor, at this point I wanted to ask a series of questions comparing the third SALP report and the fourth SALP report.

agb/agb3

The Staff had voiced their intent to put the fourth SALP report into evidence. They are locked up in Mr. Bemis' room who has gone to Brunswick.

I have a copy of the fourth SALP report but I would like to ask questions to the witness on the fourth SALP report.

JUDGE KELLEY: And what's missing other than Mr. Remis?

MR. RUNKLE: Well he's got all the extra SALP -- Staff copies of the fourth SALP report and there aren't that many available.

JUDGE KELLEY: Do I hear any objection to the general line of questioning?

MR. ROACH: No, sir.

JUDGE KELLEY: We'll see if we can't dig up enough copies and --

BY MR. RUNKLE:

Q Sir, do you have a copy of the fourth SALP report before you?

A Yes, I do.

JUDGE KELLEY: Let us find ours.

(Brief pause.)

JUDGE KELLEY: We're ready to proceed with SALP III and IV.

Go ahead, Mr. Runkle.

agb/agb4

BY MR. RUNKLE:

Q. Sir, to clear up a previous question, can you turn to page 35 on the fourth SALP report?

In this section, which discusses radiation controls at the Brunswick reactors, if you can look at the third paragraph down on page 35 --

A. Yes.

Q. In the second sentence it says -- it compares the Brunswick's collective dose at 3,492 man-rem compared to a 2000 man-rem average for a two unit BWR.

Do you have any doubt that that is the number that we were looking for previously?

A. I can accept that number. I don't see any real relevancy to it.

I think that an average man-rem for a two-unit BWR station is a meaningless figure when taken by itself. It would depend a great deal on what activities had transpired at that site and how many people they had had on that site during that time.

A person, by his mere presence on-site, is going to accumulate some exposure just from natural radiation if he's wearing his dosimeter. So if you have a large number of people on-site, you're going to have a much higher man-rem value than if you have fewer people on-site.

agb/agb5

In no way does that suggest that that's an unsafe plant or a poorly-managed plant.

Q. Can you turn to page 15 of the third SALP, that's JI 21, SALP III?

JUDGE CARPENTER: Mr. Runkle, what was the page number again?

MR. RUNKLE: Page 15.

BY MR. RUNKLE:

Q. Sir, can you also turn to page 37 of the fourth SALP?

On page 15 of the third SALP, the second violation is for a failure to have a maintenance, trending and review program, is it not?

A. Yes.

MR. ROACH: Did you say training or trending?

MR. RUNKLE: -- trending and review program.

BY MR. RUNKLE:

Q. What is your present trending and review program?

MR. BARTH: Could we have a definition, your Honor, of what is a trending and review program and then the second question of course is what is the present one, how it's changed, so that we have a definition in the record we can use rather than more confusion.

JUDGE KELLEY: Does the phrase come from SALP --

agb/agb6

MR. RUNKLE: Yes --

JUDGE KELLEY: -- trending and review program?

MR. RUNKLE: The maintenance, trending and review program.

JUDGE KELLEY: Well I don't know, Mr. Barth, it looks like the NRC knows what it means. They used the phrase.

MR. BARTH: Your Honor, it may well be true it's in the SALP but I think we have a record here which needs -- the fourth SALP is not in evidence at this time, we're pulling two words out of it and I don't understand at this point what these are, what these words mean.

JUDGE KELLEY: Well can the Staff help us as the author of the document?

MR. BARTH: No, your Honor, it is not my question. I cannot help you at all. That's why I asked the question as to what they mean.

MR. RUNKLE: I would be glad to ask the question. That's no problem.

JUDGE KELLEY: Well go ahead.

There is an objection to your question as phrased because it uses the phrase "maintenance, trending and review program," correct?

MR. RUNKLE: Yes.

JUDGE KELLEY: Can you shed any more light on

agb/agb7

what that means?

MR. RUNKLE: I think that's the one that's the ARTEMIS program. But I'm not sure which one of the three computer programs that is exactly.

JUDGE KELLEY: I guess my assumption was that if one read this long SALP document you would find in there some discussion of this beyond the sort of bullet entry under number two that might show what it was about.

Is that a clear phrase to you, Mr. Howe?

THE WITNESS: I beg your pardon?

JUDGE KELLEY: Do you understand the phrase, do you think you know what it means?

THE WITNESS: "Maintenance, trending and review?"

JUDGE KELLEY: Yes.

THE WITNESS: Yes, sir.

JUDGE KELLEY: Well let's go ahead.

It seems to me that if the Staff uses the phrase they are hardly in a position to object that it is unclear.

MR. BARTH: We referred to their program, sir. We didn't invent the phrase; it's not our phrase, it's the company's phrase.

JUDGE KELLEY: Well but you've got a report here -- I'm just going to overrule the objection. The

agb/agb8

witness here knows.

Now Mr. Barth points out that it's really CP&L's phrase here and Mr. Howe is here for CP&L and he'll tell us what it means. So go ahead.

BY MR. RUNKLE:

Q. Sir, what is your present maintenance,trending and review program?

A. It is a program by which we trend the results and the failures of various pieces of equipment: whether a particular type of gasket has a longer life-use time than a different type of gasket; it's a matter of being able to look at various components and pieces of equipment and trend their performance and the success that one has with these components.

Q. And during the review period covered under the third SALP report you did not have a program to do this?

A. I think there was a program which perhaps the Staff felt was insufficient, not as formalized as they would have suggested.

Q. And after your review of the third SALP, did you implement a maintenance, trending and review program?

A. We have a maintenance, trending and review program, yes. It is under development and is being used and expanded.

agb/agb9

Q. Would this maintenance, trending and review program be at all related to tech specs?

A. No.

Q. On page 37 of the fourth SALP report, on the second paragraph under the maintenance section it states that continued expansion and improvement of your various programs in maintenance control are required to insure a uniformity of work practices.

Is that a fair restating?

A. It's one sentence out of that entire paragraph.

MR. ROACH: I'm going to object to the question. I think the document says what it says; I don't see any reason to try to restate a paragraph.

THE WITNESS: I think the preceding sentence indicates that we do have a complete maintenance, testing and calibration program and the Commission is making a notation here that continued expansion and improvement are required to make sure we have uniformity of work practices.

I think that is not an unreasonable position and we would concur in it.

MR. BARTH: I would make a suggestion, Mr. Kelley. We have a problem because this document is not in evidence and I think to give a full -- this is the one time I do not object to reading a paragraph

agb/agb10

out of a document since it is not in evidence so that that way when we look at the record we'll have a context of what the question is, what we're talking about.

JUDGE KELLEY: Why don't we solve the problem by putting it in evidence?

Does anybody object to the introduction in evidence of SALP 4?

MR. ROACH: No, sir.

MR. RUNKLE: No, sir.

JUDGE KELLEY: It can be the Board's exhibit or your exhibit.

MR. BARTH: We would make it our exhibit, your Honor. I would provide 11 copies to the Reporter at the beginning of the session tomorrow morning and move that it be admitted as part of the Staff's direct testimony and that it be bound in the record as though read forth at length by Mr. Bemis.

JUDGE KELLEY: Okay, fine.

MR. BARTH: It would not be marked as an exhibit, sir, it will be just simply bound into the record as though read at length.

JUDGE KELLEY: A staff exhibit but no number because it is being bound in.

MR. RUNKLE: And we are all clear that this is the fourth SALP report.

agb/agb11

BY MR. KUNKLE:

Q. Sir, do you agree with the next sentence, which begins: "Maintenance instructions in many areas remain poorly understood..."?

A. This is an area that we are actually pursuing, as noted in subsequent sentences of this paragraph, and we are rewriting these maintenance instructions to improve their quality and clarity.

And I don't know if I would call them -- I don't know if I would classify them as "poorly understood," I think they're understood but I think there was a need there to improve them and that needed to be responded to very aggressively.

Q. When did your program to rewrite the maintenance instructions begin?

A. This was identified back in 1982 as one of the items we wanted to pursue.

Q. And are you continuing to rewrite your maintenance instructions?

A. That we are.

Q. Do you currently incorporate industry standards such as the INPO -- that suggested by INPO into your maintenance instructions?

A. We are attempting to be responsive to the guidance provided by INPO.

agb/agb12

Q. When did you adopt or incorporate these INPO standards?

A. Whenever they were issued. I don't have the date for that.

Q. Do you incorporate INPO standards in other areas besides --

A. We attempt to utilize the good practices identified by INPO, we are attempting to utilize the performance criteria provided by INPO. We feel that INPO is a very useful organization and wherever practical we avail ourselves of the guidance and the recommendations provided by INPO and in a timely manner to the extent practical.

Q. When did CP&L begin using INPO as a resource in this kind of manner?

A. Whenever INPO was created. I can't remember the exact date, it was shortly after Three Mile Island and we have been an active participant in INPO since its creation and have attempted to utilize the guidance provided and INPO is continuing to provide guidance.

Q. How did you develop standards before INPO was formed?

A. Standards related to what, sir?

Q. Maintenance, while we're on this area.

A. Utilize industry good practices, vendor

agb/agb13

recommendations, guidance of that sort as provided.

Q. And you developed them yourselves?

A. No, not in all cases. Some of the maintenance practices were prescribed by the manufacturer.

Q. And you would adopt those for your own --

A. That we would, yes.

Q. -- management practices.

Before you adopt an industry standard suggested by INPO or vendors or what have you, would you determined whether those were valid standards?

A. We would assess the quality of it and the appropriateness of it for our own operation.

endAGB#16

#17 AGBwbl

Q. At this time I would like you to turn to page 18 of the third SALP, and compare that to -- in part, to page 40 of the fourth SALP.

A. Just a general comparison I would make is that in SALP-III we received a rating of 3 on fire protection and in SALP-IV we received a rating of 2, obviously demonstrating improved performance.

Q. Was fire protection viewed as a major weakness of the management of Brunswick in the SALP-III?

A. It was identified as a weakness, yes.

Q. In the SALP-IV was it not described as one of those areas that have the greatest opportunity for improvement?

A. Yes. I would note, however, that on page 40 that you referred me to, under the conclusions it's rated as a Category 2; the trend was improved. And also under the Board comments it indicates that the proper amount of management involvement was directed to this area.

Q. Did you receive a civil penalty in the area of fire protection in 1983?

A. Yes, we did.

Q. And can you briefly describe what that was for?

A. That dealt with the isolation of deluge valves to the stand-by gas treatment system through a mis-interpretation of a drawing.

Q. What other problems did CP&L have with the fire

AGBwb2

protection at Brunswick during this period?

A. There was a failure to provide a test of isolation of mechanical vac pumps, as shown here on page 40. There are all recited right here. There was a Severity Level 5, which is the lowest of the severity level violations. Failure to follow ISI procedure for recording an angle beam data.

I think that'--

MR. BARTH: Can we have just a clarification? I think Mr. Howe is referring to the first 1 in a parentheses on page 40, Severity Level 5, Violation: Failure to provide a procedure for testing isolation of mechanical vacuum pumps?

THE WITNESS: That's dealing with the ISI; I beg your pardon.

JUDGE KELLEY: There have been a couple of confusions here. The fire protection is really on 41.

THE WITNESS: On 41; yes, I see that.

JUDGE KELLEY: There was an earlier reference to 40 and the fact that's Category 2 and improved. But it turns out that on both 40 and 41 it has got Category 2 and improved, so it's an accurate bottom line.

THE WITNESS: The violations are recited on page 41.

BY MR. RUNKLE:

AGBwb3

Q. Let me be a little clearer with my questions in this area to make sure which SALP I'm referring to.

In the period during which the SALP-III was prepared, did CP&L receive a civil penalty in the area of fire protection?

A. There is a notation on page 18 of SALP-III that inadequate fire protection procedures contributed to the violations which resulted in a February 1983 civil penalty. Now, if this section is referring to Brunswick, then I would have to assume that yes, there was a civil penalty there. But I haven't established yet that that section--

MR. BARTH: Your Honor, I would call attention that the preface at the beginning of SALP goes through January. He's now talking about one month later, and that isnot included within the purview of the period under analysis in the SALP-III. We're getting enormous confusion on dates. SALP-III only goes through January 31, '83, and the civil penalty resulted in a February '83 civil penalty.

On the other hand, that could have been a penalty assessed in February for something that occurred in the prior period. It just is not clear in the record at the moment.

JUDGE KELLEY: Well, let's see if we can unsnarl it.

MR. RUNKLE: Let me explain how I see it, and then if we can use that as a baseline.

AGBwb4

JUDGE KELLEY: All right.

MR. RUNKLE: The civil penalty that was assessed in February 1983 was for Violation 1 which occurred in the SALP-III on page -- that would be on page 18.

JUDGE KELLEY: Just a minute.

In the middle of 18 it talks about the civil penalty of February 28, '83, Violation 1. Now, where do you think Violation 1 is?

MR. RUNKLE: That is the first violation under that section, near the bottom of the page.

The incident happened in the review period of SALP-III, but the fine--

JUDGE KELLEY: Wait a minute. Judge Carpenter is pointing out that in the middle of the third paragraph it talks about "resulted in the February '83 civil penalty, Violation 1," -- and then look at the next line, "listed in surveillance of in-service testing area," which is the preceding section; correct?

It looks to us like it refers to the middle of page 17, which refers, under the "1" heading to a Severity Level 3 violation.

MR. BARTH: That comports with our understanding of it, your Honor.

JUDGE KELLEY: Now, are you saying, Mr. Barth, that that violation didn't occur during the tim e period

AGBwb5

covered by SALP-III?

MR. BARTH: No, I'm not saying that, your Honor.

JUDGE KELLEY: Okay.

Can we go ahead with the question, then?

MR. ROACH: Your Honor, we have Mr. Banks here who is on his way to Brunswick, to the station, and he needs to talk to Mr. Howe. Can we take a short break?

JUDGE KELLEY: Yes; ten minutes or so.

(Recess.)

JUDGE KELLEY: We'll go back on the record.

MR. RUNKLE: I will withdraw the question that I posed right before the break. I have misread the different SALP reports. Dr. Carpenter's reading was correct.

JUDGE KELLEY: Okay.

BY MR. RUNKLE:

Q. Mr. Howe, in the period in which the third SALP report was prepared, were there fire protection problems at the Brunswick plant?

A. Yes.

Q. And those violations would be listed on page 18 and page 19 of the third SALP report?

A. There are four such items identified on page 18 and page 19 of SALP-III.

Q. And they are all Level 4 violations, are they not?

A. My copy shows them to be Level 5 violations.

AGBwb6

Q. Okay; those are Level 5 violations in the SALP-III report.

A. Yes.

Q. Turning to the fourth SALP, which is page 41 of the fourth SALP, did fire protection continue to be a problem?

A. In the fourth SALP it is indicated that improvement had been made, but I think, as shown on page 41, there continued to be problems.

Q. And there were five violations in this period, were there not?

A. That's correct.

Q. And four of these were Level 4 violations and the other one was Level 3?

A. That's correct.

Q. Did the Level 3 violation lead to a civil penalty?

A. To the best of my recollection it did. I think it was somewhere in the neighborhood of thirty or forty thousand dollars; I don't remember the exact magnitude of it.

Q. Would you accept subject to check that it was a 40-thousand-dollar civil penalty?

A. Yes.

Q. And can you describe briefly for the record what

AGBwb7

this violation was?

A. Stand-by gas treatment system contains charcoal which is heavily loaded with fission products that could exceed the ignition temperature of charcoal. There are built into these stand-by gas treatment systems deluge valves which could be used to spray water on the charcoal. The technical specifications actually require that at least one of these systems be operable. Through a mis-interpretation of a drawing, both deluge systems were inadvertently closed for a short period of time, thus exceeding the limit of the technical specification.

End-17

fls

fls AGB
WRB18/eb1

Q Based on your review of the fourth SALP report in relation to fire protection, what changes will be made at the Brunswick Nuclear Power Plant?

A Even prior to the issuance of the fourth SALP report, we had embarked on the fire protection improvement program resulting in a reorganization of our fire protection program. An extensive retraining program is being conducted. Additional personnel have been assigned to this program. These personnel have an on-going systems training to gain greater familiarity with the design and purpose of the different components within the various systems of the plant.

Q When was this change implemented?

A We started defining this program in -- I would think almost back in '83 some time. I don't remember the exact date.

Q Would it be fair to say late '83?

A I would say even more in mid-'83. We were aware that we needed to take corrective action and it started into various programs and defining these programs and identifying resources.

Q Sir, at this time I would like to bring to your attention a document which was passed out to all parties and identified as JI-23.

(Whereupon, the document was identified as JI-23 for identification.)

BWRB/eb2

BY MR. RUNKLE:

Q Do you have a copy of that before you?

MR. ROACH: Mr. Chairman, I would like at this time to make an objection to any reference to Exhibit JI-23.

JI-23 is a report or a paper written by a fellow named Ronald Jacobstein on behalf of the public staff of the North Carolina Public Utilities Commission for use in an adversarial proceeding involving CP&L in a general rate case.

Mr. Jacobstein is not present in the hearing room, nor is he available for us to cross-examine him as to the statements made herein. When this report was submitted to the NOrth Carolina Commission in the adversarial rate proceeding, CP&L took strong exceptions to a number of the statements made in the report.

Rebuttal testimony was filed. Responsive reports were entered into the record. But in all those documents, the issue was economics and not safety.

So we object to the document, one, on the grounds that it is hearsay, that there is no basis for admitting into evidence the statements made herein, because Mr. Jacobstein is not available as a witness, and secondly, that it doesn't go to the safety of the Harris plant. There is nothing here to show any characteristics of CP&L as to the safe operation of Harris.

JUDGE KELLEY: Let me ask the Staff next, and then

WRB/eb3

I can go back to you, Mr. Runkle.

MR. BARTH: Your Honor, we have no difference with the representations of the Applicants' attorney. We would like to go one step further and point out that the very top line states "Final Draft." This is a draft document, and we have no evidence that it represents the position of Mr. Jacobstein.

We were unfamiliar with this document until we walked into the hearing a few days ago, and had subscribed to the comment basically made by counsel for the Applicants with the addition that this does appear to be a draft.

JUDGE KELLEY: Mr. Runkle, would you respond, please?

MR. RUNKLE: Well both parties have been aware that we had intended to offer this exhibit into evidence to be used in this proceeding. In responses to interrogatories propounded by Applicants, we stated that this would be one of the documents which we were going to question the witness on.

Furthermore, in the preparation of Joint Contention 1, which is what we're having hearings on today, in some of the background documents which were supplied to each party at that time, we stated that this document provided the basis for Joint Contention 1, in part.

JUDGE KELLEY: Well, I'm not aware that we had any requirement of filing an objection in advance. We needed

WRB/eb4

to know what the exhibits were going to be, and they were exchanged, except you brought yours in at a later date.

Now are you saying they should have objected six months ago, or something? In your view is this an untimely objection to this document?

MR. RUNKLE: I think that the Staff's objection is untimely.

As to the objection as to hearsay, I mean I can argue that also.

JUDGE KELLEY: Why do you say the Staff is untimely?

MR. RUNKLE: The Staff's-- If I may summarize what Mr. Barth just said, that the Staff did not realize until a couple of days ago that this document was to be put into evidence, and he said he had not seen it.

JUDGE KELLEY: Well, true enough.

Mr. Barth I believe said he endorsed everything that had been said by the Applicants and then he added a couple of points, one of which was that this was a draft; we don't know whether it is the final version or a draft. And then he did say he saw it only recently.

Was that the main point of your objection, Mr. Barth,--

MR. BARTH: Yes, your Honor.

JUDGE KELLEY: -- that you only got it recently?

MR. BARTH: Your Honor, at the first prehearing

WRB/eb5

conference held at the local government building to the east of here, attended by Mr. Karman where the contentions were discussed, the piece of paper which I hold in my hand was never made a part of the original contentions. We had no knowledge of--

JUDGE KELLEY: Well, let me interrupt.

Didn't we have a big discussion the other day about Mr. Runkle's exhibits being late, whether they were, whether they weren't, and then the Board came up with a solution and he served a list and he served copies. Now we've come across that bridge, haven't we?

MR. BARTH: That's correct, your Honor. This is the first time I've seen the document as a result of your Honor's rulings.

JUDGE KELLEY: I understand that. I understand fully with respect to a big thick document that might create a problem for you, but we did that anyway. I think we have crossed that bridge, as I see it.

The bridge we have not crossed is whether it is objectionable -- let me put it this way -- for lack of a sponsor.

You say hearsay. Well, yes, it is sort of hearsay, but in our practice anyway, lots of things are hearsay. If you've got a rather crucial document, though, that you're putting forward, typically we have a sponsor

WRB/eb6

here who can answer questions.

I think that what we really want to focus on primarily, Mr. Runkle, is the absence of Mr. Jacobstein as a witness to sponsor this report and respond to questions about it. And I gather you don't intend to call Mr. Jacobstein.

MR. RUNKLE: No, we do not.

JUDGE KELLEY: Okay.

How do you respond to the objection then that the Applicants have made?

MR. RUNKLE: Well, the Applicants have reviewed this document at length and I am certain that Mr. Howe has in his position at Brunswick. We asked specific interrogatories about this document to the Applicants and they responded that they agreed with certain listings of valve failures and the like in this document.

They relied on it. They have made actions as a result of this document.

JUDGE KELLEY: Well, that may all be true but there is a lot in this rather large document. I'm not doubting your statement at all, but I gather from the objection from the Applicants that this also contains material that they don't think is very favorable to their cause, and that they feel that therefore they are prejudiced by a lack of ability to cross-examine the author.

WRB/eb7

And without parsing this and deciding exactly which pages and paragraphs you think fall under which category, on the assumption that it is unfavorable to the Applicants in many respects, aren't they prejudicted by the lack of Mr. Jacobstein's presence?

MR. RUNKLE: Well, no more than they were prejudiced by the lack of the presence of Cresap, McCormick and Paget in allowing that document -- portions of that document and their responses to it into the record.

JUDGE KELLEY: Well, just a minute.

The reference is to Cresap, McCormick. Aren't the Applicants free to make a tactical judgment just like you would be, just like Mr. Barth would be, which says this one doesn't hurt me too much, and there's a lot in there that helps me, so I'm not going to object. So they don't object.

They don't waive an objection to some further document, do they, by that?

MR. RUNKLE: No, but the-- I mean that certainly is an action that they can take. Your question had gone to whether they were, you know, prejudiced, and I do not feel that they are prejudiced. They have been, you know,-- They have had this document in their possession for a long time, and are certainly aware of the contents of it.

JUDGE KELLEY: They probably have been intending to object to it for a long time when this hearing finally

WRB/eb8

came to a joinder of issues.

Is there any particular reason why Mr. Jacobstein hasn't been called?

MR. RUNKLE: Primarily it's a financial consideration. We can't afford him.

JUDGE KELLEY: At least there's background. Mr. Jacobstein, what does he do? Is he a professor or--

MR. RUNKLE: If you will notice in Appendix B, which is the very end of this document, it presents his qualifications.

JUDGE KELLEY: Yes. Where is he currently employed? Can you tell me?

MR.RUNKLE: He has a consulting firm in Washington, D. C called--

JUDGE KELLEY: International Energy Associates Limited?

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: So he did this under contract to the Utilities Commission.

MR. RUNKLE: Yes, sir.

MR. ROACH: Not the Utilities Commission, to the Public Staff of the Utilities Commission. The North Carolina Public Staff is an adversarial group which is set up to oppose utilities in rate cases.

JUDGE KELLEY: I understand. Thank you.

WRB/eb9

MR. RUNKLE: I would like to briefly disagree with that statement. It is not set up as an adversarial body against the utilities. It is set up as a body to represent the public interest.

JUDGE KELLEY: I understand. I think the ICC has something like that. There are one or two organizations like that in the federal government, public interest councils, so to speak.

Will you remind me again, Counsel? Your objection is a hearsay point? Did you have a separate point?

MR. ROACH: Relevance. It goes to the same sort of outage and economic sort of considerations which we have addressed before.

The point I think really is that it's hearsay, that Mr. Jacobstein is not here and we cannot ask Mr. Jacobstein questions to show the falsity of statements made in a report.

Secondly, the report as you said does not have a sponsor. Nobody has come in to say this statement is true and to support the statement and be available to be questioned about it. So hearsay is the real thrust of the objection, and the failure to have a sponsor of the document.

JUDGE KELLEY: Well, I guess I would say in response that any NRC case of this nature with a record that high, so-and-so many pounds, is going to have an awful lot of hearsay in it. We don't have any automatic exclusionary rule

WRB/EB9

for hearsay.

MR. ROACH: I think the difference here, though, is documents by third parties are sometimes offered in these sorts of proceedings, the government records or records kept in the normal course of business by the utility, or something that has some inherent trustworthy nature to it.

JUDGE KELLEY: Well, you can do that analysis and you might be able to get it in on that basis. I'm simply saying that we are going to have Mr. Bemis here who is going to tell us about SALP, presumably, and to answer questions anyway. He is an adequate sponsoring witness we've been led to believe, and I presume he is.

We've put in SERs and FSARs and we have to produce somebody who can answer questions. It doesn't mean that they wrote it. And similarly here.

If this whole thing is Jacobstein's product, then perhaps this is closer to the classic example, but I'm just saying that the fact that something is hearsay doesn't mean it doesn't get in, necessarily. But this idea of having a sponsoring witness for an important document such as this appears to be is deeply embedded in our practice.

Could you indicate to us generally, Mr. Runkle, if this document were allowed in, how it would be used, how you want to use it, and speak to the objection that it is economic data really rather than safety data?

WRB/eb10

I'm not asking for, obviously, a page-by-page analysis, but a general response.

MR. RUNKLE: If you will turn to the Table of Contents on page -- which is the second page of this document, it is a summary in a lot of aspects of the deterioration of the different systems, the surveillance systems, problems with different valves, reactor safety systems, pumps, and that kind of thing that occurred in the Brunswick plant from 1979 to 1981.

JUDGE KELLEY: Okay.

MR. RUNKLE: It also summarizes specific management issues, problems with programs at the plant in the same time period. And in many respects it's a summary document of a whole series of problems at the plant in that time period.

JUDGE KELLEY: Could you give us an example? If we permitted you to start now, where would you go with this document? What kind of questions would you ask?

MR. RUNKLE: Well, one of the main areas in it is at page 4-1 which is on the problems of the main steam isolation valves.

JUDGE KELLEY: Let's take a minute just to look at this, please.

(Pause.)

End 18
WRB19 fls

WRB/pp 1
#19

JUDGE KELLEY: I'll tell you what seems a little troublesome to me. If this were a collation, let's see, of NRC reports, if it were something like that, that might be one thing. But to take a sentence like the third sentence on page 4-1, "However collectively the impression presented by the spectrum of issues and problems may lead one to believe the situation is perhaps worse than it really is."

That's Mr. Jacobstein's opinion, is it not?

Sort of a sweeping opinion?

MR. RUNKLE: Yes, sir. Yes, sir, it is.

But in the responses to the interrogatories from applicants, they state that they agree with the listing of the MSIV failures which occurs on the next couple of pages.

MR. ROACH: If Mr. Runkle wishes to use an interrogatory answer, we have no objection to that. That's dealing with a specific area where we can look at that and get specific questions and specific answers. THe idea of filling this entire report in for all the various subjects that it addresses is the problem. And also the fact it's got all Mr. Jacobstein's opinions in it and Mr. Jacobstein is not here.

JUDGE KELLEY: You indicate that Mr. Jacobstein isn't here among other reasons because of a cost factor. Did you investigate how much one day of Mr. Jacobstein's

time might cost?

MR. RUNKLE: Yes, we did. And it was after the prehearing conference in September 1982 and I don't recall the figure. As I understand it the cost of preparing this report and also testifying for the public staff was in the neighborhood of $15 to $20 thousand. He was contacted by one of the joint intervenors a year and a half ago. And at that time we made the determination that that was too much.

JUDGE KELLEY: I grant you that's pretty high but I wonder whether he would have charged you the same thing to come down here with the report already written just to take the stand for a day.

MR. RUNKLE: I can't put any more clarification on that.

JUDGE KELLEY: Okay.

Well, I think we need to just adjourn for a minute or two or three to consider this. We'll take a short break.

(Recess.)

JUDGE KELLEY: The Board has a pending objection to the introduction into the evidence of Joint Intervenors Proposed Exhibit No. 23, which is entitled " Investigation of Carolina Power and Light Company, Brunswick Steam Electric Plant, February 1982" by A. Ronald Jacobstein, prepared for the State of North Carolina Public Staff Utilities Commission.

WRB/pp 3

The main thrust of the objection from Mr.Roach joined in by Mr. Barth is that the document should be excluded for lack of a sponsoring witness. We are sustaining the objection and excluding this document. We view it as not a matter of discretion. I think the Board is required under these circumstances to exclude this document.

NRC practice, in a case like this, is to produce a sponsoring witness who is knowledgeable about the document in question and who can answer questions about it. Preferably the author, not necessarily the author. Here we have no sponsoring witness.

This practice, I think, goes back a good ways. I can just -- I will cite one case that I'm familiar with. Again, in the San Onofre operating license case. The board there fell into error and admitted the FSAR over the objection of the Intervenors. And the Appeal Board held that that was an error. But they also held in that particular case it was a harmless error. And they went on to fill out the practice that ought to be followed. And the basic holding is that you do have to have a sponsoring witness and you cannot admit documents for general evidentiary purposes unless you have a sponsoring witness.

I won't say documents I'll say important documents, substantial documents, there are all sorts of single pieces

of paper that come into these cases without sponsoring witnesses. But if they are extensive, if they are reports, if they are investigations such as this proffered exhibit, then the rule comes into play.

You might note in addition that although this document from Mr. Jacobstein does appear to contain a fair amount of fairly straightforward recital of facts, which perhaps wouldn't be subject of a lot of debate, nevertheless throughout it one finds opinions of the author often cast in rather sweeping terms. And that's precisely the kind of thing that does require a sponsoring witness.

Whether we would allow a document of this kind into evidence upon a showing that Mr. Jacobstein was totally not available or, in Europe, or dead, or whatever, is a question we need not reach. We haven't been given such a showing. Even if we had one we might exclude it. But on the facts as prese ed to us, we have no alternative.

We'd just point out that it's possible to raise some of the same questions that Mr. Jacobstein focuses on in his report through discovery material, as Mr. Roach pointed out. We've had some earlier questioning about LERs, presumably the LERs overlap some of the things Mr. Jacobstein looks at.

So it's not that we're closing a door on areas of inquiry. What we're closing the door on is Mr. Jacobstein's

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opinions in the absence of Mr. Jacobstein. So that's our ruling on that point.

Go ahead, Mr. Runkle.

BY MR. RUNKLE:

Q. Sir, can you place before you what has been previously identified as JI-23 and distributed to all the parties?

A. What was the reference, again?

Q. That was JI-23.

A. I have it.

JUDGE KELLEY: 23 is Jacobstein; is that right?

MR. RUNKLE: Yes, your Honor.

JUDGE KELLEY: I'm not clear where we're headed. What's your intention, Mr. Runkle?

MR. RUNKLE: My intention is to ask him questions about certain terms and whether he agrees with certain things in the report, and I'll offer it for evidence.

JUDGE KELLEY: I understand.

Does everybody have copies?

(Indications of assent.)

BY MR. RUNKLE:

Q. Sir, have you ever made a review of this document before?

A. I have read it some time agao.

Q. Would that be in 1982?

A I think sometime in that timeframe.

Q On page 2.2-4 of this document there is a summary listing of key upsetting events for Unit 1.

A What's the cite again, Mr. Runkle?

MR. RUNKLE: 2-4.

JUDGE KELLEY: Okay.

BY MR. RUNKLE:

Q What is a key upsetting event,Mr. Howe?

A I'm not sure how it's used in this context, sir.

Q Would it be perhaps a precursor to a meltdown?

A Looking at the list I would hardly think so.

Q Does CP&L keep track of these kind of events at their Brunswick plants?

MR. BARTH: Objection, your HOnor. We don't know what these kind of events are. This is under a summary of key upsetting events. And Mr. Howe testified he doesn't know what that means.

JUDGE KELLEY: Do you mean the ones listed on that page as examples?

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: The witness can answer that if he can.

A (The Witness) Such events a this would be noted in our shift logs, yes.

BY MR. RUNKLE:

Q And these would be -- many of these would also be listed in the outage reports that we have previously entered into evidence, are they not?

A In looking at the items here I would doubt if many of these would be included in a document related to a scheduled outage whether these relate to a blown fuse, and various activities, that they don't seem to be related to scheduled outages.

Q Can you turn to page 4-1 of this document?

A I have it.

Q And also page 4-2 and 4-3. It purports to list a history of MSIV valve failures does it not?

A Yes, it does. Which have subsequently been corrected.

Q What is an MSIV?

A Main steam isolation valve.

Q Has there been a history of problems with the main steam isolation valves at Brunswick?

A There were some problems back in the earlier days of Brunswick. This was due to a poor thread engagement towards the stem disc matching. We had some problems in which we get a separation of the stem and the disc. This was later redesigned by the manufacturer and the MSIVs at Brunswick were repaired and replaced with new parts. We have not have any difficulty with MSIVs

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of this nature since that replacement.

Q And would the technical specifications for the plant cover mainsteam isolation valves?

A In what context, sir.

Q Assembly?

A No.

Q Maintenance?

A No.

Q Any other areas?

A Operability, yes.

Q And the tech specs would set standards on the operation of these valves would they not?

A They would set closure times.

Q But they also describe inspection and other surveillance for these valves?

A There would probably be some surveillance testing cited in the tech specs for those. Yes, under closure times.

Q In the problem that you just described about the poor thread engagement caused by improper tolerances, would you say this was a vendor problem?

A Yes. The vendor so acknowledged and changed his design, provided replacement parts which were installed and there has been no subsequent problem.

Q Before the vendor admitted that it was a vendor

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problem, had you adopted the standards for these valves that had been supplied to you by the vendor?

A I'm not sure what you're using the word standard. We had purchased the valves from the manufacturer and we did not build the valves. The manufacturer built the valves.

Q Did you follow the standards of operability proposed by the vendor or presented by the vendor?

A We followed the operability requirements set forth in the tech specs.

Q And did you later change the tech specs after the vendor changed his standards?

A There way no need to change the tech specs after the vendor changed his design. The tech specs addressed the closure time of the MSIV. That closure time was unaltered in the technical specifications by events relating to the stem disc separation problem.

Q And since September 1981 have there been any stem disc separation failures at the Brunswick MSIVs?

A Not to my knowledge.

Q Have there been any problems with MSIVs as associated with valve stem galling?

A I think we did have one problem with galling. In early 1983, there was a valve specific galling problem due to some material on the seal that was repaired.

Q And did maintenance also change after this time?

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A I don't recall a specific change in the maintenance procedure at that time. It may have occurred. But not to my knowledge.

Q In the time period from 1979 to 1982, did Brunswick have problems with the RWCU heat exchangers seal welds.

A I was not assigned at Brunswick at that time period and could not speak to that.

Q Can you speak to any problems that they had during that time?

A I probably could from hearsay. If you would like to identify them I can let you know whether I can speak to them or not.

Q Are you familiar with problems that Brunswick had on the service water pipe replacements?

A To a certain degree, yes.

Q And what were those problems?

A This was a spallation of the concrete lining of the service water pipe which allowed salt water to come in contact with the metal underneath the concrete lining due to some flaws in the pipe.

Q And what kind of metal was this?

A The pipe further up the system was copper-nickel pipe which has subsequently been replaced. Copper-nickel at that time was considered the most durable for that

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environment.

Q And what was it changed to?

A We changed that to -- I beg your pardon. I think that pipe was steel and was changed to copper-nickel pipe.

Q Were any of the service water pipes ever changed to titanium?

A No, the condenser tubes were changed to titanium.

Q Sir, in the tech specs for the Brunswick plant,

B-20

is there a consideration of hurricanes?

A There is even a tech spec dealing with hurricanes.

MR. RUNKLE: I have no other questions of this witness.

JUDGE KELLEY: You watched us go through our sequence before, Mr. Howe. We will go over the Staff and then over to the Board and then back to the Applicants.

#20 WRBwbl

MR. BARTH: Your Honor, if you'd give us about two minutes the Staff can decide whether we want to cross-examine.

JUDGE KELLEY: Sure.

(Whereupon a brief recess was had.)

JUDGE KELLEY: Back on the record.

Go ahead.

MR. BARTH: We have no questions to ask Mr. Howe, your Honor.

JUDGE KELLEY: Fine. Thank you.

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EXAMINATION BY THE BOARD

BY JUDGE BRIGHT.

Q. Mr. Howe, I have just one short question. This Brunswick improvement plan, is that specifically directed at organization and personnel rather than, say, capital improvements or instrumentation or whatever? I'm trying to get a feel for it.

A. Yes, sir, in the main it is. It deals more with organization, personnel, surveillances. It does set forth the prerequisite for certain computerized programs such as the surveillance testing and tracking program, activities of that sort. It doesn't in and of itself direct itself to the installation of specific components or systems.

Q. Then you would figure that if you get the right people and the right organization they'll take care of this

WRBwb2

other stuff?

A. Yes, sir.

Q. Is that the idea?

A. Yes, sir.

Q. Thank you.

BY JUDGE KELLEY:

Q. I have two or three points.

Quite early in your testimony you were referring to various indications of safety or lack of safety at a given nuclear power plant, and one of the things you referred to was LERs. We've had some earlier testimony about LERs.

How do you view LERs as an index of safety? Do you think they're a good index, do you think they're a bad index, or what qualificaqtions would one have to put on it?

A. I'd like to break the answer into two time frames, if I may, Mr. Chairman. Prior to January 1, 1984, I think it was a moderate index, because there were a number of obligations under the reporting requirements of LERs at that time that reported in some cases virtually administrative details and things that really had little relevancy to safety.

I think the NRC took a very well justified step commencing in January of '84 to restrict and become more explicit in the requirements for LER reporting, and I think this will in turn enhance the utilization of the LER as an index of safety.

WRB?wb3

Q. Thank you.

You testified this morning at some length about outages, and we looked at some particular outages, and you explained how you wouldhave a planned outage for a certain period of time. But as I heard you anyway, you would perhaps discover in the course of shutting down and opening up certain equipment, other things that you would address.

My question is this: Do you think that there is any trade-off between having a longer outage, unplanned longer outage and having forced outages later?

To put it a different way, if you try hard to get back on line at the time that you plan to, and you tend not to make fixes that you find, on the theory that they'll last for another go-round, would you find yourself over the long run into more forced outages than if you did watever needed fixing and went ahead and left it down for some substantial period of time?

A. Again I'd put my answer into two portions.

In some cases those things which you find need fixing once you've gotten into the outage you could not come back up without fixing them because of LCOs or regulatory requirements. The second part is that--

Q. What's an LCO?

A. A limited condition of operation in which you may be allowed to have a battery or component out for eight, twelve

WRBwb4

or twenty-four or seventy-two hour type situations; unless it's a very minor item. And we have in the past deferred some minor items that have little if any implication for safety.

I would prefer that plant to be solid when it comes up, and not take the chance of having further deterioration.

Sometimes you can create a domino effect. If you allow one part to operate in less than normal mode, it may start to impose strains and stresses further through the system, which could then produce not only a forced outage but perhaps a very large forced outage.

My philosophy is that if you plan these things well enough and execute them well enough, and put time into your planning for the unanticipated, then you can complete your outage within schedule sucessfully, perhaps even ahead of schedule if you have the good fortune of not encountering surprises.

Q. You seem to be suggesting that not only might there be a trade-off but you'd be worse off in the long run if you didn't go ahead and attend to anything that you found.

A. Yes, sir.

Q. I suppose you could play games with planned outages, that concept, too, and say "I'm going to shut down for

WRBwb5

a month to do A, B and C, and then I'll stay down for another month and do whatever else I find and call that a two-month planned outage." But that doesn't... There's no substance in that kind of a thing.

A. No.

Q. Just a little while ago we were looking at SALP-IV, and we were looking at the aggregate rem exposure for the period of time that SALP-IV covers, which my notes suggest was 3,492 man-rems for about a year or whatever it was.

Could you put that in some kind of perspective? You indicated, of course, that that depends on how many people were there and so on.

But could you give us a ballpark indication of how many people might have been involved in that period?

A. Yes, sir, I think I can.

End-20

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A. Yes, sir, I think I can.

In 1983, the total number of persons that were monitored --

Q. Is '83 the time for SALP IV?

I asked for information --

A. That covers January 31st, '83 until April '84, I believe it is.

Q. So SALP is about 15 months, is that right?

Okay. Go ahead.

A. Something in that time frame. This one is more than an annual period, it covers February 1, '83 to April 30th, '84. SALP IV covers a period longer than a calendar year.

The only data I have at present would be showing for 1983.

Q. But still that's relevant --

A. The total number of persons monitored at Brunswick during that annual period was 7020 people.

Q. Okay.

A. The total persons with a measurable exposure -- meaning within the sensitivity of the TLD -- was 5602.

Q. Does your typical visitor get a measurable exposure?

A. If he's just touristing, if you like --

agb/agb2

Q. Yes.

A. No.

But we have a lot of personnel who will come down from nuclear licensing, nuclear engineering and they're out doing work in the plant, taking measurements for design, that type of thing --

Q. Yes.

A. Total persons with significant exposure -- meaning more than 100 millirem per year -- would be 2872.

Now 100 millirems is quite low when you consider that you're allowed 5000 millirem per year.

MR. RUNKLE: Could you repeat that number?

THE WITNESS: Total persons with exposure equal to or greater than 100 millirem would be 2872.

I think we've already cited -- perhaps we haven't -- that the total man-rem in 1983 was 3475; the average man-rem based on all persons monitored would be 0.5.

BY JUDGE KELLEY:

Q. That's half a rem.

Right.

A. Again I think --

Q. This is right in the NRC book, I know, but what is the annual max for a person?

agb/agb3

A. Five rem.

Q. Five.

Go ahead. Did you have anything else?

This is all helpful, I think, or at least it gives me some context.

A. That seems to be about -- I could provide you some distribution if it would be of value.

Again, using the value of the 7020 persons that were badged: 1418 received no measurable exposure.

2730 received less than a tenth of a rem.

515 received between a tenth of a rem and a quarter of a rem.

354 received between a quarter of a rem and a half a rem.

302 received between a half a rem and three-quarters of a rem.

282 received between three-quarters of a rem and one rem.

853 received between one and two rem.

417 between two and three rem.

149 between three and four rem.

No one received above four rem -- and CP&L had set a policy of limiting annual exposures to no more than four rem rather than utilizing the NRC's five rem.

Q. That's an ALARA approach to the --

agb/agb4

A. Yes, sir.

Q. Okay.

Thank you, that's helpful.

JUDGE KELLEY: I don't have any more questions.

Redirect?

MR. ROACH: No, sir.

JUDGE KELLEY: Mr. Runkle, anything else?

MR. RUNKLE: Yes, sir.

At this time I would like to offer JI 23 into evidence, which is the Jacobstein report. I have never offered it into evidence.

JUDGE KELLEY: Okay. It is offered.

Objected to?

MR. ROACH: Yes, sir, we would make the same objections that we made earlier.

JUDGE KELLEY: Same objection. Sustained for the reasons previously stated.

MR. RUNKLE: Fine.

At this time I would like to make an offer of proof which includes the Jacobstein report and the discussion around its admission and those various questions that I asked related to the Jacobstein report.

JUDGE KELLEY: Well again I think the matters other than Jacobstein, I mean, they're in the record anyway and they would be associated with those parts

agb/agb5

of the transcript.

Any objection to the offer of proof of this Jacobstein report?

MR. ROACH: I'm not sure he's made one.

He asked a question to Mr. Howe about the Jacobstein report. He has not indicated what he would show in addition to what he has already asked, unless he is just making a general proffer that he would put the report in.

I'm having some trouble figuring out exactly what he's doing.

JUDGE KELLEY: Well I guess we haven't been very strict on that, I think Mr. Barth made a similar point the other day interms of what is a proper proffer.

I gather --

MR. ROACH: I guess my question is would he have additional questions. Is he saying that he would have additional questions for Mr. Howe if the report were an exhibit and, if so, what does he expect those answers to be?

That seems to be to be a proper proffer.

JUDGE KELLEY: Well I don't know if he has to recite every answer he thinks he's going to get.

Do you want to indicate the direction you would go in terms of further questions in a sentence or

agb/agb6

two?

MR. RUNKLE: Yes, sir. I would ask about specific problems listed in the Jacobstein report.

In Part 3 -- I'm talking about 3-1 -- there is a listing with the description of each of those problems and also going down in Section 4 several of the problems that are listed here are described in detail.

MR. ROACH: There is no bar -- or there was no bar to Mr. Runkle asking questions about any matters that were discussed in the report. I think what we're saying is the report is not an exhibit and therefore Mr. Jacobstein's opinions are not evidence. He was not restricted on his questions about subject matter.

MR. RUNKLE: I did feel constrained in taking the time to establish each point. It would have been a lot easier to have sections put into evidence and to be able to refer back to the whole thing if it had been in evidence.

The ruling before it was offered --

JUDGE KELLEY: I guess I frankly assumed that when you made a formal offer of proof that meant you wanted the whole thing in so that you could go up -- if the result of this hearing is that you're dissatisfied and you end up on appeal you can tell the

agb/agb7

appeal board what Mr. Jacobstein thought about this facility. I thought that was the point of it.

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: Okay.

And we rejected that. But it was one of your purposes to get in Mr. Jacobstein's views, I thought, right?

MR. RUNKLE: Yes.

JUDGE KELLEY: Okay. And we rejected it but as an offer of proof we accept it on that basis and anticipate that if you ever find yourself in an appeal posture you could use it for that purpose.

I think that it's correct, Mr. Roach is right, that we haven't constrained questions on particular problems at the facility; the time might come where we would just on the ground that we feel that there's been enough, but we haven't so far.

But I now understand the offer to be, at least in part, to be able to persuade a higher tribunal that Mr. Jacobstein's opinion should not have been excluded, correct?

MR. RUNKLE: Yes, not just his opinions but his summaries of different incidents.

JUDGE KELLEY: Well okay. And on that basis we'll accept it as an offer of proof.

agb/agb8

You said no redirect, right?

MR. ROACH: That's correct.

JUDGE KELLEY: Mr. Runkle, I guess I turned to you and then we talked about Jacobstein.

Do you have any further questions based on what came out of the Board's questions?

MR. RUNKLE: No, sir, I do not.

JUDGE KELLEY: Okay.

Mr. Howe, we appreciate your being with us today, I know you must have been torn. We hope that you will find everything more or less in place and in the right order when you get down there and we appreciate your coming. Thank you very much, you're excused.

(The witness excused.)

JUDGE KELLEY: Do we have the next panel?

MR. ROACH: Yes, sir, they're here --

(Counsel conferring.)

MR. ROACH: No, sir, they are not.

We talked with Mr. Runkle earlier and he indicated he had two hours of work before he did the Harris panel and we are agreeable to recessing at this time until tomorrow if that's acceptable to the Board.

JUDGE KELLEY: We'll be ready to go then at 9:00 with the next panel?

MR. RUNKLE: Certainly.

agb/agb9

JUDGE KELLEY: Anything else that needs to be brought up?

MR. RUNKLE: I would like to discuss scheduling a little bit with --

JUDGE KELLEY: Okay.

Should we be on the record or should we just do it off the record informally?

MR. RUNKLE: I think we can take care of it informally.

JUDGE KELLEY: Okay. We can go off the record.

(Whereupon, at 5:00 p.m., the hearing in the above-entitled matter was recessed, to reconvene at 9:00 a.m., the following day.)

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the UNITED STATES NUCLEAR REGULATORY COMMISSION in the matter of:

NAME OF PROCEEDING:

CAROLINA POWER AND LIGHT COMPANY
and NORTH CAROLINA EASTERN MUNICIPAL
POWER AGENCY

Shearon Harris Nuclear Power Plant
Units 1 and 2

DOCKET NO.: 50-400 OL and 50-401

PLACE: Raleigh, North Carolina

DATE: 11 September 1984

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

(Sigt) William R. Bloom Anne G. Bloom
(TYPED) William R. Bloom & Anne G. Bloom

Official Reporter

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