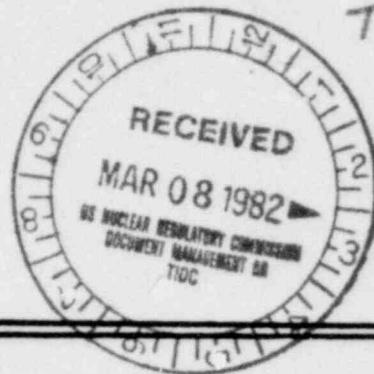


NUCLEAR REGULATORY COMMISSION

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In the Matter of:

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

SUBCOMMITTEE ON WATERFORD STEAM ELECTRIC STATION

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1                   UNITED STATES  
2                   NUCLEAR REGULATORY COMMISSION

2                   ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

3                   SUBCOMMITTEE ON WATERFORD STEAM ELECTRIC STATION

4                   - - -  
5                   Room 1046  
6                   1717 H Street  
7                   Washington, D.C.

8                   Wednesday, March 3, 1982

9                   The Subcommittee on the Waterford Steam  
10                  Electric Station was convened at 8:35 a.m., DAVID WARD,  
11                  Chairman of the Subcommittee, presiding.

12                  PRESENT FOR THE ACRS:

13                  SUBCOMMITTEE MEMBERS:

14                  DAVID WARD, Chairman  
15                  MYRON BENDER  
16                  MAX CARBON  
17                  JEREMIAH RAY  
18                  CHESTER SIESS

19                  ACRS CONSULTANTS:

20                  R. PEARSON  
21                  F. BINFORD

22                  ACRS STAFF:

23                  STUART BEAL

24                  DESIGNATED FEDERAL EMPLOYEE:

25                  GARY QUITTSCHREIBER

26                  COMMISSION STAFF PRESENT:

27                  R. TEDESCO  
28                  S. BLACK  
29                  R. BENEDICT

## 1 ALSO PRESENT:

2 J. M. WYATT  
3 G. D. McLENDON  
3 L. V. MAURIN  
4 F. J. DRUMMOND  
4 Z. A. SABRI  
5 J. SLEGER, JR.  
5 D. B. LESTER  
6 T. F. GERRETS  
6 K. IYENGAR  
7 G. D. McLENDON

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## 1                   P R O C E E D I N G S

2                   MR. WARD: Good morning. The meeting will now  
3 come to order. This is a meeting of the Advisory  
4 Committee on Reactor Safeguards, Subcommittee on the  
5 Waterford Steam Electric Station.

6                   My name is David Ward, the Subcommittee  
7 Chairman. Other ACRS members present are Mr. Bender,  
8 Mr. Carbon, Mr. Ray and Mr. Siess; and also consultants,  
9 Mr. Pearson and Mr. Binford.

10                  The purpose of this meeting is to continue our  
11 review of the Waterford application, particularly review  
12 of the management, training and staffing of the LP&L  
13 Company with regard to their application.

14                  This meeting is being conducted in accordance  
15 with the provisions of the Federal Advisory Committee  
16 Act and the Government in the Sunshine Act. Mr.  
17 Quittschreiber is the designated federal employee for  
18 the meeting; and also in attendance is Mr. Beal of the  
19 ACRS staff.

20                  The rules for participation in today's meeting  
21 have been announced as part of the notice of this  
22 meeting previously published in the Federal Register on  
23 February 17th and March 1st, 1982. A transcript of the  
24 open portions of the meeting is being kept and will be  
25 made available as stated in the Federal Register

1 notice. We request that each speaker first identify  
2 himself or herself and speak with sufficient clarity or  
3 volume so that he or she can be readily heard by the  
4 reporter.

5 We have received no written statements from  
6 members of the public and we have received no requests  
7 for time to make oral statements from members of the  
8 public.

9 I don't have any comment to make. To start  
10 off, I'd like to invite any other members or consultants  
11 to make any comment now if they have anything. If not,  
12 we will go right to Ms. Black and the staff report.

13 (Slide.)

14 MS. BLACK: My name is Suzanne Black. I am  
15 the licensing project manager for Waterford.

16 The construction of the plant is now 95  
17 percent completed. Projected fuel load date is January  
18 1983, the same as the OL issuance date. I have a brief  
19 summary of the review schedule.

20 We are presently working on supplement number  
21 3. The purpose of this meeting today is to address  
22 Licensee qualifications, which was left as an open issue  
23 on the letter that was written last August. Today the  
24 staff will make two presentations, the first being on  
25 Licensee qualifications, the conclusions of our review

1 to date; and the second one will be on the staff's feed  
2 and bleed issue.

3 This is the first opportunity the staff has  
4 had to discuss a CE plant with you since your ACRS  
5 letter on Palo Verde.

6 Any questions?

7 (No response.)

8 Mr. Bob Benedict of the staff will make a  
9 presentation on Licensee qualifications.

10 MR. WARD: Okay, fine. Thank you.

11 (Slide.)

12 MR. BENEDICT: I am Robert Benedict of the  
13 Licensee Qualifications Branch, Division of Human  
14 Factors Safety.

15 Since the SER was issued last year and the  
16 ACRS considered the Waterford application, the Applicant  
17 has made a very noticeable turn-around in organization  
18 and staffing and in general in getting his act  
19 together. We were able to accomplish most of the review  
20 that had not been completed at the time the SER was  
21 issued.

22 In January we issued SER Supplement No. 2. I  
23 assume you gentlemen have read it, so I will summarize  
24 very briefly what the Applicant has done to overcome the  
25 staff's concerns that were evident at the ACRS meeting

1 last year. I will also note those areas that are not  
2 yet closed out finally.

3                 The Nuclear Operations Department has  
4 undergone considerable reorganization. Management has  
5 been strengthened by the addition of experienced  
6 technical advisors to the vice president and the plant  
7 manager. Many administrative services that were  
8 formerly the responsibility of the plant manager have  
9 been moved out of the plant organization and are now  
10 handled by a separate department manager who reports to  
11 the vice president.

12                 A training director has been hired and outside  
13 consultants have been added to the corporate safety  
14 review committee. An accelerated recruitment program  
15 has brought the total staffing of the Nuclear Operations  
16 Department up to 75 percent of its authorized level.  
17 There now appear to be enough RO and SRO candidates in  
18 training and in the pipeline to give reasonable  
19 assurance that there will be an adequate number of  
20 licensed operators available at fuel load.

21                 We were able to conduct our audit of  
22 management and technical resources at a meeting held in  
23 December of last year. As a result of that meeting, we  
24 came away with a much warmer feeling about the  
25 Applicant's capabilities than we had earlier.

1           I would like to bring you up to the moment on  
2 those outstanding matters that we had noted in the  
3 second supplement, where some items were still open.  
4 The Applicant has been keeping us informed monthly by  
5 letter on how the staffing is going. Since the  
6 supplement, Supplement 2, was issued, they have added  
7 about 40 people, and as of February 15th -- that is, the  
8 letter from the Applicant of February 15th -- they had  
9 306 people on board out of 417 authorized.

10           This is a marked-up version of the table that  
11 we had put into Supplement No. 2 and is essentially what  
12 the Applicant reports to us each month. These are the  
13 figures of people on board at the time of the supplement  
14 or prior to the supplement. And as of the 15th of  
15 February these were the numbers of people on board in  
16 the various areas.

17           And you can see that they have come up from  
18 267 to 306, or about 40 people have been added.

19           MR. WARD: Could I ask a question? In the  
20 group under project support, that seems to be the lowest  
21 fraction of the 100 percent staff, 38 out of 77.

22           MR. BENEDICT: Right.

23           MR. WARD: I guess I'm a little puzzled  
24 there. For example, in the construction engineering  
25 group there are 7 now out of 12. But the construction

1 is, you know, certainly well along, winding down if  
2 anything.

3 Do you have any comment on that? You know, it  
4 seems to me approaching 100 percent there at the time of  
5 fuel loading is -- maybe I don't understand what that  
6 group does. Perhaps you could comment on that?

7 MR. BENEDICT: Certainly the Applicant can  
8 give you more details than I. However, the construction  
9 engineering group will be there during operations, in  
10 support of changes to the plant, primarily in that  
11 area.

12 I don't see any denials from over here, but  
13 perhaps Fred Drummond could give you a little better  
14 rundown.

15 MR. WARD: Okay. Well, from the title of that  
16 I would have the impression that that is a group that  
17 has some sort of primary responsibility for following  
18 the construction for the Applicant, and I would have  
19 thought that would have been in full force a long time.  
20 But if it's for construction change after startup, that  
21 is perhaps a different issue.

22 Mr. Drummond?

23 MR. DRUMMOND: My name is Fred Drummond. I'm  
24 the project support manager. The construction  
25 engineering group is under me.

1           At the last ACRS meeting that group had a  
2 complement of five, which it had been authorized at. We  
3 increased the authorized complement in that group to, as  
4 Mr. Benedict said -- as construction continues and we go  
5 operational to accept more of the responsibility of the  
6 direct interface between the contractors that we might  
7 have working with us and the rest of the program.

8           So that group has been augmented numberwise.

9           MR. WARD: So as that group comes up to force,  
10 your contractor people will be phased out, is that the  
11 idea?

12           MR. DRUMMOND: No. This group right now  
13 interfaces between a construction manager and Louisiana  
14 Power & Light Company. As the plant is built and the  
15 contractors are phased out of the job, there will be an  
16 ongoing residue of that program, I'm certain. And we  
17 built the staff up to take responsibility for the direct  
18 interface with the architect-engineer, so that the  
19 operational engineering group can be LPL's engineering  
20 internal group, which in the current organization, or  
21 the previous organization, the engineering group  
22 downtown was primarily interfacing with the  
23 architect-engineer on design matters.

24           MR. WARD: Okay, I think I understand. Thank  
25 you.

1                   Mr. Benier?

2                   MR. BENDER: Could I just get a little  
3     clarification of where the onsite construction people  
4     are going to? I think we have always been conscious of  
5     the value of having in the plant some people that were  
6     there from the time the plant was built and would recall  
7     what was there and had some understanding of the way in  
8     which the plant was built and would maintain some  
9     continuity after the plant was in operation. What is  
10   envisioned?

11                  MR. DRUMMOND: Well, we have a significant  
12   amount of that that I'm going to address in my  
13   presentation. I will address that.

14                  MR. BENDER: Oh, okay, fine.

15                  MR. BENEDICT: We have also recently seen  
16   resumes of six recent additions to the nuclear project  
17   support group. Some are experienced and a few are  
18   recent graduates. Most are taking STA training. So  
19   that the overall project support group is gradually  
20   growing.

21                  The plant staff has increased by 13 people,  
22   and we have seen resumes of three new startup people and  
23   eight new technical support group people in the nuclear  
24   and plant engineering groups. They also show a variety  
25   of experience and are all enrolled in the STA training

1 program.

2                 However, there still are unfilled senior  
3 positions that     noted in the Suppiement No. 2. At  
4 least we are not aware that they have filled these  
5 positions yet, and we have not seen details yet of the  
6 training program for non-licensed personnel. I'm sure  
7 that will be discussed at length today.

8                 The Applicant also has to fill in a few of the  
9 small open blanks on some of the outstanding action plan  
10 items that we noted in the supplement concerning  
11 overtime, independent verification, shift supervisor  
12 administrative duties, issuance of a directive on  
13 authority and responsibilities of the shift  
14 superintendent, and on the STA training program.

15                 We have noted in the supplement that that had  
16 been changed. However, we believe that the Applicant  
17 has made significant progress in satisfying the staff's  
18 concerns about LP&L's capabilities. So long as the  
19 Applicant fills the senior positions soon and presses  
20 forward with the training program, we expect that we  
21 will be able to conclude that LP&L does have the  
22 capability to operate Waterford 3 safely.

23                 MR. WARD: Bob, the senior positions in the  
24 SER, there are two jobs called -- one is called head of  
25 plant engineering and the other is head of nuclear

1 engineering. It's indicated those are now contract  
2 personnel. Are those the positions you're talking  
3 about?

4 MR. BENEDICT: I have the page marked in my  
5 copy of the supplement over there. It's the left-hand  
6 page and it was -- there is a list of them near the top  
7 of the page. Several supervisors in maintenance --

8 VOICE: Page 13-6 of the supplement -- 16,  
9 13-16.

10 MR. BENEDICT: That sounds about right. I  
11 didn't bring it up here with me. Yes, that looks like  
12 it there.

13 They may have filled in some of those since,  
14 but --

15 MR. WARD: When a position is filled with the  
16 contract personnel, you consider that as filled?

17 MR. BENEDICT: Yes.

18 MR. WARD: Okay.

19 MR. BENEDICT: But we're looking for the  
20 permanent people to come on board as soon as possible,  
21 because we want that continuity going into fuel  
22 loading.

23 MR. WARD: Do you have any breakdown of --  
24 let's see. The numbers you have up there indicate 75  
25 percent of the staff is filled. What percent of those

1 306 are LP&L employees? Do you have a rough idea?

2 MR. BENEDICT: I'm sorry, I don't have that.

3 VOICE: That's all of them.

4 MR. WARD: All of those, LP&L?

5 VOICE: Yes.

6 MR. BENDER: Bob, a couple of questions.

7 First, does the staff have any viewpoint about how long  
8 one of these organizations should be in place in order  
9 to provide some opportunity for establishing good  
10 working relationships between your organizations and  
11 making sure that the management has an understanding  
12 within itself as to who does what and who has  
13 capabilities and that sort of thing?

14 MR. BENEDICT: Yes. We don't have written  
15 criteria. However, our position is that the senior  
16 positions ought to be filled, say, about a year before  
17 fuel load. This is a subjective feeling that with that  
18 amount of time they can then get the rest of the staff  
19 going and develop their working relationships, iron out  
20 the bugs of any new organization, and be rolling  
21 smoothly.

22 We don't insist that every position be filled,  
23 but we believe that the supervisory senior positions  
24 should be filled.

25 MR. BENDER: Another matter. In the SER it

1 was noted that Mid-South Services, I guess, is building  
2 up its organization to some degree. Is there some  
3 interdependence between those two organizations that we  
4 should be aware of, that has an influence on the  
5 effectiveness of the management capability? Are there  
6 certain skills that are in Mid-South services that are  
7 important to the operation of this plant that should be  
8 considered in determining whether the plant is ready for  
9 operation?

10                   MR. BENEDICT: Well, certainly they have  
11 certain capabilities that can assist LP&L. We have not  
12 generally concluded that those were required support  
13 positions. I think you recall that earlier we said in  
14 the original SER that, based on the information we had  
15 about Mid-South, most of their help was going to be in  
16 fuel management type of things.

17                   As a result of our discussions with the  
18 Applicant at our audit meeting, I think we came away  
19 with some of the information they provided us, and I  
20 think we came away with the feeling that there was more  
21 there than just fuel management. However, that was  
22 still the primary area, and we have not looked upon it  
23 as being essential to the operation of the plant.

24                   We think that it is a plus, but they ought to  
25 have their own capabilities in most of these areas. If

1 they rely on MSS for certain technical capabilities that  
2 they might not normally maintain in their staff, that's  
3 fine, because it's the same thing as going somewhere  
4 else for additional consultant services.

5 MR. BENDER: Well, I'm really trying to  
6 develop an understanding of how self-sufficient an  
7 organization like this has to be. And if I were to  
8 interpret your statement I would conclude that Mid-South  
9 Services organization is just another contractor. Is  
10 that an understatement of what they really are?

11 MR. BENEDICT: I don't know. I don't know  
12 beyond --

13 MR. BENDER: Maybe wher the Applicant  
14 discusses the matter they can tell us more about it. I  
15 wouldn't be inclined to want to have to take that  
16 position. If they have capabilities in Mid-South  
17 Services and they can be effectively utilized, it seems  
18 to me they ought to be given full credit for it. But  
19 I'd like to know that they can be counted on if they  
20 want to take credit for it.

21 MR. WARD: On that subject, Bob, you seem to  
22 have had sort of a turn-around in your opinion on the  
23 significance of Mid-South Services' support with regard  
24 to safe operation of Waterford. Is that primarily  
25 because of better understanding of the relationship than

1 you had originally, or did they make some changes in the  
2 organization or the intent of the relationship?

3 MR. BENEDICT: A better understanding on our  
4 part of the relationship and who was available at Middle  
5 South. Until our -- until recently, the last few  
6 months, the information that we had available to us  
7 about who was available at Middle South and what their  
8 talents were was quite skimpy. We did not go into great  
9 detail on it.

10 Since then, however, we have gotten resumes of  
11 some of their senior people there and they are  
12 impressive. They seem to have valuable experience that  
13 could probably be used by LP&L to advantage. That's the  
14 basis for the turnaround in my mind about Middle South,  
15 that they can do a little bit more.

16 MR. WARD: Thank you.

17 A couple of other questions. You say that  
18 your general belief is that the senior positions should  
19 be filled a year in advance of fuel loading. They  
20 aren't all filled and we are apparently in ten months  
21 advance of fuel loading, if I get the dates right. But  
22 you have concluded that the level of staffing is  
23 adequate.

24 Is this just a --

25 MR. BENEDICT: No, I don't think I said we

1 have concluded. I said we will be able to conclude that  
2 they are in shape to run the plant if they get these  
3 people on board soon.

4 MR. WARD: But this is despite the fact that  
5 they haven't met your sort of subjective guideline of  
6 senior positions all filled a year in advance of fuel  
7 loading?

8 MR. BENEDICT: That's correct, they have not  
9 -- the one year, like with many other things, is not  
10 firm, fixed and you can't stamp it on the floor. But we  
11 certainly would hope they would have these people on  
12 board very soon. And by that we are talking about one  
13 year.

14 If it were three weeks before fuel load, we'd  
15 be very unhappy. But the numbers games in between --

16 MR. WARD: Okay. We are zeroed now down  
17 between three weeks and one year. I'm not picking, but  
18 I mean, when will you get unhappy?

19 MR. BENEDICT: I think I'll be unhappy if they  
20 don't have something to say today that shows that they  
21 are getting some more of these people in. I would like  
22 to await any further information that they might give us  
23 today to see how unhappy we get.

24 However, I think what we will continue to do  
25 is to keep pressing them to get these people on board.

1 And if they don't need that fuel load date, then they  
2 have a little bit more slack.

3 MR. WARD: One more question, and maybe this  
4 can be deferred to Mr. Maurin during his presentation.  
5 But back to the 75 percent again, the 75 percent  
6 staffing is all with LP&L employees. So I assume some  
7 of that gap of the remaining 25 percent is presently  
8 taken up by contract employees. Is that all 25 percent  
9 or -- will you answer that later on, Mr. Maurin?

10 MR. MAURIN: Yes.

11 MR. WARD: Okay. Thank you.

12 MR. BENDER: Bob, a couple of more points that  
13 occur to me. First, when we talk about these management  
14 positions, do we have a good understanding of what the  
15 duties are of the senior management personnel? We've  
16 got the block diagrams. I have seen some resumes of  
17 people. But if I were to look down through the  
18 organization chart, would I know what the duties were of  
19 all these people that we are encouraging the Licensee to  
20 put into his staff?

21 MR. BENEDICT: The duties have been fairly  
22 well expressed, I believe, in the FSAR, describing the  
23 functions of these people.

24 MR. BENDER: Basically that's still the  
25 reference?

1                   MR. BENEDICT: That is basically the  
2 reference, that's correct. They are also in their  
3 management control programs which we have mentioned,  
4 they also include in that as part of that program, they  
5 have specified duties for individuals.

6                   MR. BENDER: The other point I wanted to raise  
7 was the matter of establishing operating procedures, and  
8 I mean by that more than just how the plant operates,  
9 but procedures for handling maintenance, for dealing  
10 with safety problems and things of that sort, the kind  
11 of things that management people have to be a part of in  
12 developing a mode of operation.

13                  Are these kinds of activities going on right  
14 now, the development of those management procedures?

15                  MR. BENEDICT: Yes, they are all part of this  
16 management control program and they are in process -- in  
17 progress.

18                  MR. BENDER: And is that part of your  
19 assessment process, determining whether they're in place  
20 and whether they're adequate?

21                  MR. BENEDICT: We do not go into the details  
22 of a performance procedure. We are not maintenance  
23 engineers, for example. We do look to see that they  
24 have the administrative procedures in place under which  
25 the detailed procedures would be prepared, and that is

1 what we did in taking a look at this management control  
2 program.

3 MR. BENDER: Thank you.

4 MR. WARD: Mr. Ray?

5 MR. RAY: Bob, I am inclined to agree that the  
6 Louisiana Power & Light has made significant progress in  
7 augmenting the staff over what was heard originally.

8 But there are certain functional elements of the staff  
9 which I think are rather critical and which I hope the  
10 Licensee will address from the viewpoint of the  
11 prospects of coming a little closer to the complement in  
12 terms of the improved complement when they make their  
13 presentations.

14 And these areas are: in health physics, where  
15 they're only up to 50 percent, and certainly they'd  
16 better get in line on that as fuel loading approaches;  
17 operational review, which is 40 percent; staff training,  
18 they're only at 50 percent. Certainly a lot of that has  
19 to be in progress well before January 1, 1983. And the  
20 quality assurance staff is two-third complete.

21 I'd like to have these items particularly  
22 addressed when the Licensee makes his presentation from  
23 the viewpoint of what the prospects are to have a more  
24 nearly complete organization in those functional  
25 capacities and what's been done about them.

1                   MR. WARD: Any other questions? Mr. Binford?

2                   MR. BINFORD: One thing that concerns me a  
3 little about this is, it's all well and good to have  
4 warm bodies in place, but what is your feeling regarding  
5 the adequacy of the depth of operational experience with  
6 commercial nuclear steam supply systems that this  
7 organization has? Or is that too premature and we'll  
8 hear about that later?

9                   MR. BENEDICT: We had addressed that early on  
10 in our SER and indicated that the Applicant really ought  
11 to get some people with commercial operating experience  
12 on board. The Applicant, as I mentioned earlier, has  
13 obtained two technical assistants, one for the vice  
14 president and one for the plant manager, who have really  
15 very broad and extensive experience in plant operation,  
16 commercial plant operation. We understand that they  
17 have been quite helpful to the management since they  
18 came on board late last summer in getting things  
19 moving.

20                  We have also indicated that they should have  
21 people on each operating shift who have commercial  
22 operating experience, and they have agreed to provide at  
23 least one person on each shift who has had previous  
24 commercial operating experience.

25                  MR. BINFORD: Will we get some more details of

1 this in the later presentations?

2 MR. BENEDICT: I see the Applicant nodding  
3 their collective heads.

4 (Laughter.)

5 So I think you will.

6 MR. WARD: Bob, don't leave yet. I have one  
7 more question. As I understand it, the guidelines in  
8 NUREG-0731 talk about three safety review committees. I  
9 don't know if that's the term you use. One is sort of a  
10 corporate level, one is a plant level, and then there's  
11 the ISEG, the independent safety engineering group.

12 As I look at the Applicant's organization, I  
13 have a little trouble distinguishing between the ISEG  
14 and the plant engineering group. Do you think that the  
15 organization as the Applicant has presented it meets the  
16 guidelines of NUREG-0731? Or if not, do you have some  
17 reason to believe it's acceptable otherwise?

18 MR. BENEDICT: I believe you're speaking  
19 primarily about the ISEG arrangement being a part of the  
20 line organization?

21 MR. WARD: Well, yeah. I can see ISEG being  
22 an ongoing organization, but there doesn't seem to be a  
23 plant safety review committee separate from that ISEG  
24 organization.

25 MR. BENEDICT: No -- well, what we call PORC,

1 they are on-site safety review committee, which is made  
2 up of primarily the managers of the plant and  
3 supervisory positions. They are the plant safety review  
4 group.

5 The corporate management plus the plant  
6 manager, I believe, plus three outside consultants,  
7 whose names as a matter of fact we indicate there, form  
8 the corporate safety review committee.

9 MR. WARD: I guess I haven't made myself very  
10 clear, I'm sorry. I don't see where the PORC fits in.  
11 Maybe I have missed it here. But in looking at the SER  
12 I don't see --

13 MR. BENEDICT: The PORC doesn't show on an  
14 organizational chart, nor, I don't believe, does the  
15 SRC.

16 MR. WARD: Yes, the SRC does.

17 MR. BENEDICT: PORC doesn't show. I guess we  
18 have just never shown it per se or described it.

19 MR. WARD: But you're satisfied there is a  
20 PORC?

21 MR. BENEDICT: There is a PORC and it's  
22 described in the supplement.

23 MR. WARD: Okay.

24 MR. BENDER: Bob, you're aware of the  
25 Committee's position with respect to a couple of other

1 reactors. We made a point of looking for experience in  
2 these lower level review committees in terms of being  
3 sure there were people on the committee who were  
4 familiar with the issues that had to be dealt with for  
5 safety purposes when changes are made in operating  
6 procedures and things of that sort.

7 This corporate level review committee that's  
8 listed here probably is not going to meet very often.  
9 What's the staff's view concerning participation at  
10 plant-level review committees?

11 MR. BENEDICT: We have seen your letters on  
12 some plants --

13 MR. BENDER: I hope so.

14 MR. BENEDICT: -- in which you're suggesting  
15 that outsiders be included on such things as the plant  
16 safety review committee.

17 MR. BENDER: We ask for knowledgeable people.

18 MR. BENEDICT: Knowledgeable people, yes.

19 MR. WARD: You worried me when you said that  
20 we were suggesting that outsiders be included on the  
21 PORC. I think that was a misinterpretation, which maybe  
22 we cleared up at the last meeting and maybe we didn't.

23 MR. BENEDICT: I think I did misinterpret it.  
24 I have read those letters some time back and perhaps I  
25 was doing some of my own thinking there.

1                   MR. SIESS: Bob, have you seen the letter that  
2 explains the letters?

3                   (Laughter.)

4                   MR. BENEDICT: No.

5                   MR. SIESS: Then you should probably reserve  
6 any statements. There was a letter written last month  
7 which presumably clarified the confusion that arose from  
8 the other letters. And we'll probably write another one  
9 this month.

10                  (Laughter.)

11                  MR. BENEDICT: Thank you.

12                  MR. BENDER: That's par for the course.

13                  MS. BLACK: Next I would like to introduce a  
14 member of the staff who will give you an update of the  
15 status on the feed and bleed issues.

16                  MR. SHEARON: My name is Brian Shearon. I'm  
17 with the Reactor Systems Branch, Division of Systems  
18 Integration, and I'm going to talk a little bit this  
19 morning on where we stand with the feed and bleed issue  
20 for Combustion plants in general.

21                  (Slide.)

22                  As you recall, the ACRS sent us a letter on  
23 Palo Verde and CESAR and the question was raised at that  
24 time whether PORV's and their integration into decay  
25 heat removal reliability should really be looked at a

1 lot harder and essentially accelerated from the  
2 unresolved safety issue item A-45, which is decay heat  
3 removal reliability.

4 If you recall, that program was designed to  
5 examine the benefits of a feed and bleed type system in  
6 PWR's. Right after the ACRS letter, as you know, the  
7 Ginna event occurred, and at least in our branch and the  
8 Division of Systems Integration we did some  
9 soul-searching, I guess, about what that event really  
10 meant for PWR's.

11 We started going through our usual "what-if"  
12 scenarios, and at that time we did have a position  
13 regarding the need for PORV's. We withheld it pending  
14 further examination: What did Ginna really mean  
15 regarding the ability to cool down plants.

16 In addition, Frank Rowesome in the Office of  
17 Regulatory Research issued a memorandum which showed  
18 that, based on at least his evaluation, that some  
19 benefit regarding reliability of decay heat removal  
20 could be obtained with PORV's. Based on this, we  
21 decided that this issue probably should be given a  
22 little more attention, or special attention, I guess.  
23 And we are presently in the process of looking at it I  
24 guess in a little more accelerated fashion than Task  
25 A-45 had scheduled it.

1           We have sent a letter from Mr. Eisenhut to  
2 Combustion Engineering and we have asked them to rethink  
3 whether PORV's make sense in their plants or not, in  
4 light of Mr. Rowesome's memo, in light of Ginna, and in  
5 light of the Committee's letter. We have not had a  
6 reply yet. I understand one is due any day. But until  
7 we get it I can't really forecast what they're going to  
8 say.

9           We are examining right now the benefits and  
10 drawbacks to PORV's, installing PORV's in a PWR.

11           (Slide.)

12           And I think it's fair to say that because  
13 we're still at the stage where we're still kind of  
14 scratching our heads and looking at it, it's not a  
15 clearcut issue. At least we don't feel right now that  
16 there is an overwhelming pile of benefits that makes  
17 these things necessary for safety and the like, that  
18 would prompt us to require them without any questions  
19 asked.

20           As you can see, feed and bleed under the  
21 benefits column does provide some additional capability,  
22 if it's a properly designed system, to remove decay heat  
23 in the event all feedwater is lost. One of the things  
24 we scratched our head about after Ginna was, what  
25 happens if you get some ruptures in more than one

1 generator, and particularly on a two by four plant where  
2 you only have two generators? What does that mean? And  
3 we think that there may be some aid that a PORV could  
4 give in the event that you had failures in tubes in both  
5 generators.

6 In the event you had a steam generator tube  
7 rupture and I'd say a secondary side break -- this could  
8 be some sort of a valve sticking open that was  
9 challenged during the event, that stuck -- you now have  
10 a direct path for primary coolant to reach the  
11 environment.

12 Low temperature overpressure protection --  
13 these PORV's on other plants that have them were used as  
14 part of the low temperature overpressure protection  
15 system. You dial a setpoint and use it as a low  
16 pressure relief valve on the primary system.

17 ATWS. Obviously, if you put more valves in  
18 they help the situation regarding the overpressure,  
19 because you increase the relieving capacity.

20 Drawbacks. Adding PORV's increases the probability of a  
21 small break loss of coolant accident. They stick open.  
22 We have seen that.

23 We have also seen from Ginna that when you do  
24 use a PORV and it doesn't perform exactly the way it was  
25 supposed to it can complicate accident scenarios. The

1 PORV sticking open at Ginna we think was what produced  
2 the bubble in the upper head, and the operators were  
3 concerned about it and therefore it produced a  
4 complication to the scenario.

5 MR. WARD: Brian, would that -- but then once  
6 the block valve was closed off, then there was a more  
7 complex situation. I mean, would the Ginna transient  
8 have been more easily handled if the PORV had never been  
9 opened, had never been there?

10 MR. SHEARON: I don't like to speculate,  
11 because we issued a preliminary memo right after that  
12 and it was taken in the wrong context. But this is just  
13 me personally speaking.

14 As I understand the situation, the PORV,  
15 because it stuck open, produced a void in the upper  
16 head. The operators were concerned about it when their  
17 charging pumps -- I mean, their safety injection pumps  
18 were running. They had reached their termination  
19 criteria. In other words, they had repressurized 200  
20 psi, they had the appropriate indication on the  
21 pressurizer, they had subcooling indications, I believe,  
22 on the hot and cold legs. And yet the operator said,  
23 hey, I've got a bubble in my system; I really shouldn't  
24 turn off my HPI, because the criteria was based on the  
25 whole system being subcooled, and gee, it's not.

1           So I think, to answer your question, yeah, it  
2 did complicate this event a little bit, because the  
3 operator leaving the safety injection pumps running  
4 longer than perhaps was necessary produced the lifting  
5 of the secondary side safety valve. So there is a  
6 potential for PORV's to complicate scenarios, not so  
7 much just by their operation, but if they fail or  
8 misoperate during the event.

9           Probabilistic risk assessments. There have  
10 been some done within NRR in the Reliability Risk  
11 Assessment Branch, and they are not totally in harmony  
12 with Mr. Rowesome's conclusion. I am not prepared to  
13 delve into the differences of why. Just suffice it to  
14 say we have two practitioners of the art and they're not  
15 together yet on it. But they're not showing any  
16 overwhelming safety benefit regarding decay heat removal  
17 reliability, for example.

18           The final item which I think is of concern to  
19 the Applicant and the vendor, and that is that they cost  
20 money to put on, so there has to be a benefit shown, I  
21 guess, in their mind --

22           MR. BENDER: Brian, I'm not sure the Committee  
23 took a position that said add PORV's. I think the  
24 position it took was, add depressurization capability.  
25 Is that synonymous with PORV?

1                   MR. SHARON: I guess it depends. We have  
2 looked at or we are looking at right now  
3 depressurization capability using just sprays. And I  
4 guess I feel that if you are inferring the  
5 depressurization capability to recover from a loss of  
6 all feedwater, then there may be auxiliary -- auxiliary  
7 sprays may be able to do the job.

8                   MR. BENDER: Well, I'm just trying to  
9 understand what your arguments are founded upon.  
10 Clearly, PORV's when they open and close during an  
11 emergency introduce some peculiarities in the behavior  
12 of the plant. Depressurization when the primary system  
13 has a higher pressure than the secondary system has some  
14 advantage in terms of getting things in a condition  
15 where you've got the nuclides where you want them.

16                  But I guess we'll hear more about that some  
17 other time.

18                  MR. TEDESCO: Let me just add, if I can, from  
19 your letter back in December, we did raise a concern  
20 about relying upon the steam generator for  
21 depressurization capability. Subsequently, the  
22 Committee also believed that it may be useful to give  
23 consideration to the potential for adding valves of a  
24 size to facilitate rapid depressurization of the  
25 system's primary coolant system, to allow more rapid

1 decay heat removal.

2 So although you did not explicitly say PORV's,  
3 I think you did suggest it. This is just another way of  
4 looking at it.

5 MR. BENDER: I don't want to get into a debate  
6 on it here. There are other ways and other approaches.

7 MR. RAY: Dave?

8 MR. WARD: Brian, part of the problem with  
9 PORV's is that if they're not reliable they can cause  
10 trouble. Would you see it as -- if PORV's were  
11 installed and made safety-grade, I mean if it was a  
12 system that had redundancy and so forth, whatever safety  
13 grade would mean, would that change the picture  
14 significantly as far as the drawbacks?

15 MR. SHEARON: I guess if one talks about  
16 making things safety grade and redundant, with block  
17 valves and the like, my initial assessment would be it  
18 can't hurt. But whether that's going to make the  
19 situation better, I don't know. There's a question, in  
20 other words, that for example putting in a block valve  
21 certainly gives the operator an added feature to  
22 mitigate any failures in the PORV. That's what the  
23 operator did at Ginna. But the damage was done from the  
24 standpoint that the valve stuck and the bubble was drawn  
25 in the upper head before the operator could get the

1 block valve.

2                   So that aspect of -- as I put it there --  
3 possibly complicating emergency situations; I'm not sure  
4 that a block valve, for example -- it may help the  
5 situation somewhat, but it's not going to alleviate it  
6 totally. In the same sense, at least I'm not a believer  
7 entirely that making something safety grade doesn't mean  
8 it can't stick open.

9                   MR. WARD: Well, it might mean you've got to  
10 have two of them, and then you might not be as reluctant  
11 to close the block valve on the first one.

12                  MR. SHEARON: I think this is something that  
13 we're going to have to look at as part of our  
14 assessment.

15                  MR. TEDESCO: I think included in that would  
16 be the program going on at EPRI, which has been a  
17 requirement from the TMI lessons learned to give added  
18 assurance about the valves that they will operate under  
19 those required moies.

20                  MR. WARD: Jerry?

21                  MR. RAY: Brian, maybe I wasn't listening hard  
22 enough. In the third bullet on your drawbacks, you say  
23 "The limited PRA's" --I'm concerned with that phrase and  
24 also the rest of the sentence -- "do not show a clearcut  
25 need for improving decay heat removal reliability." Is

1 that a total condemnation of the need for decay heat  
2 removal systems?

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1                   MR. SHEARON: No, this is only from the  
2 standpoint that when one does a PRA study, one looks at  
3 the reliability or the unreliability of the existing  
4 feedwater system. It has got x number of pumps and so  
5 many valves, and when one goes through and looks at the  
6 failure mechanisms and the like, one can come up and say  
7 that the failure of the auxiliary feedwater system to  
8 remove decay heat upon demand is some number of 10 to  
-5  
9 the minus whatever, 10 , for example.

10                  Now, if one put in, say, a PORV or PORVs and  
11 looked at it from the standpoint of how much does that  
12 increase the decay heat removal reliability, that is one  
13 approach. One can say, well, it obviously moves from a  
-4                 05             -6.  
14 number of 10    to the 10    to 10

15                  The other approach is to say how safe is safe  
16 enough with respect to the probability of core melts in  
17 an area due to loss of all feedwater, loss of decay heat  
18 removal. And when one shows that the existing system,  
19 for example, of auxiliary feedwater can meet an  
-5  
20 unreliability goal of 10 , one may say that  
21 increasing that capability to remove decay heat with the  
22 feed and bleed system doesn't buy you a whole bunch from  
23 the standpoint of overall core melt risk.

24                  Do you follow?

25                  MR. RAY: Yes.

1                   MR. SHEARON: But what that doesn't address is  
2 the other scenarios. It doesn't address it. When I say  
3 limited PRA, I am referring to it looks at, for example,  
4 decay heat removal reliability due to an auxiliary  
5 feedwater system. It doesn't look at scenarios that  
6 what is the probability of some event occurring that  
7 knocks out some significant number of tubes in both  
8 generators, as an example.

9                   MR. RAY: This statement is not intended to  
10 convey the idea that in an overall sense we are  
11 satisfied with the level of reliability of decay heat  
12 removal systems, that they cannot be improved. That is  
13 not what this is intended to convey.

14                  Are you with me?

15                  MR. SHEARON: I think I am. I am trying to, I  
16 guess, come up with a response I will feel comfortable  
17 with.

18                  MR. RAY: My interpretation of what you said  
19 is, insofar as the application of PORVs is concerned, it  
20 doesn't add any significant reliability to the decay  
21 heat removal systems; but this doesn't mean we are happy  
22 with what we have got, that there isn't a need for  
23 improved reliability in general.

24                  MR. WARD: Can Task Action Plan A-45 be  
25 abandoned?

1                   MR. RAY: That is another way of expressing it.

2                   MR. SHEARON: No, I would never say that. I  
3 am referring to the current generation of CE plants  
4 right now.

5                   MR. RAY: Okay. Now, when you say limited  
6 PRAs, you mean they were limited in their application to  
7 the benefits of PORV additions or they were rough cuts,  
8 they weren't comprehensive? What do you mean by limited  
9 PRAs?

10                  MR. SHEARON: I think by limited I mean that  
11 they only addressed the worth, I guess, of PORVs -- of  
12 feed and bleed to enhance decay heat removal.

13                  MR. RAY: Thank you.

14                  MR. CARBON: I am still unclear as to what you  
15 just said. Did you say that in your view the current  
16 generation of Combustion Engineering plants is adequate  
17 in terms of decay heat removal reliability, they don't  
18 need any improvement?

19                  MR. SHEARON: No. What I am saying is that  
20 the current generation of CE plants as I understand are  
21 complying with the Auxiliary Systems Branch position for  
22 auxiliary feedwater reliability, okay? And that  
23 depending upon who the practitioner is of the PRA, we  
24 have had one study, Mr. Rowesome's, which shows by a  
25 factor greater than 10 might be achieved in decay heat

1 removal reliability with a qualified feed and bleed  
2 system.

3 In the same sense we have had another study  
4 done by Mr. Thadani in NRR which, as I understand it,  
5 concludes that the existing systems for decay heat  
6 removal are reliable enough and that further improvement  
7 will not necessarily improve or substantially improve  
8 the risk from core melt because other sequences will  
9 dominate them.

10 MR. CARBON: Thank you.

11 MR. SHEARON: I should point out too that we  
12 are looking at other ways to depressurize with a  
13 Combustion plant without PORVs in the loss of feedwater,  
14 and we have asked our Office of Regulatory Research to  
15 examine, and I think they are about 98 percent complete  
16 with the analysis o the use of auxiliary spray in the  
17 pressurizer.

18 Right now they have run the calculation out to  
19 the point where they are starting to lose inventory, net  
20 loss of inventory from the primary system; and as you  
21 know, once the pressurizer is solid, there is no steam  
22 to condense. They have found -- I think they told me  
23 that you may buy something on the order of an hour in  
24 operator action time if the operator turned on auxiliary  
25 spray and started to depressurize with auxiliary spray.

1               The question that they are still looking at  
2 right now is that once you drain -- I guess I shouldn't  
3 say drain, but once the primary system boils off to the  
4 point where the level comes down below the hot legs,  
5 steam can then exit the pressurizer. Steam that is  
6 generated in the core can now travel up the hot legs.  
7 It is no longer accumulating in the upper part of the  
8 vessel.

9               Okay, that is filled with steam. Steam can  
10 now exit out the pressurizer, and once you can possibly  
11 drain the pressurizer and have it just discharge the  
12 steam being generated, the sprays may become effective  
13 again and depressurize in the plant to below the SI  
14 shutoff head, in which case the SI pumps could come on  
15 and pump some more water in the system.

16              It may be a very unstable situation but it may  
17 keep the core covered. We don't know yet. This is one  
18 option we are still investigating. I think once we get  
19 the Combustion letter in with their assessment, we will  
20 probably meet with them, with the owners of Combustion  
21 Engineering plants and try and reach a decision one way  
22 or the other.

23              I don't have anything else on the subject  
24 right now if there are no more questions.

25              MR. WARD: Okay, thank you, Mr. Shearon. I

1 think we need to move on.

2 Suzanne, is that all you have?

3 MS. BLACK: Yes, that is all we have.

4 MR. WARD: Next on our agenda is LP&L, and Mr.  
5 Wyatt, I believe.

6 MR. WYATT: Good morning. My name is Jack  
7 Wyatt. I am President of Louisiana Power and Light  
8 Company, and we certainly appreciate the opportunity to  
9 meet with you today to discuss the activities in  
10 Waterford 3 and to tell you of the progress we have made  
11 since we met with you last August.

12 In connection with the questions that were  
13 asked of Mr. Benedict, I hope that we will address most  
14 of those, if not all, in today's presentations, and I  
15 hope they will be addressed to your satisfaction, at  
16 least a great part of them will.

17 After receiving your report of last August,  
18 we, I guess, first thoroughly analyzed what you said,  
19 and after that we made a self-appraisal of LP&L and all  
20 of its activities and how it affected our operations.  
21 We then had several discussions with the NRC staff, and  
22 then we, I guess you would say, performed some rather  
23 extensive research insofar as the proper approach to  
24 resolve the areas of concern that you addressed.

25 Since last August we have taken several

1 positive steps that we believe you will be interested in  
2 and some of which were mentioned, of course, by Mr.  
3 Benedict this morning, and others that we will address  
4 in our presentation today.

5 We first strengthened immeasurably our  
6 recruiting activities and operations areas, and I think  
7 we made some positive results. I think that you will be  
8 aware of that when our presentations are made, and we  
9 are still working extremely hard to accomplish the rest  
10 of them.

11 We formed, as has been mentioned here and as I  
12 know you have seen, a separate Nuclear Operations  
13 Department. Formerly Nuclear Operations was under the  
14 Power Production Department, as you recall, and we  
15 formed a completely separate department. We staffed it  
16 and have it headed by a vice president of nuclear  
17 operations, Mr. Maurin, whom you know, and we located  
18 Mr. Maurin at the site of Waterford 3.

19 In addition, we rearranged his reporting  
20 responsibilities where he reports to our Vice President  
21 of Operations, Mr. McLendon, and I think that has been a  
22 very positive step in our overall activities.

23 We in addition reassigned our Quality  
24 Assurance Section, which, by the way, also incorporates  
25 not only the nuclear but the fossil activities of our

1 company to report to the Senior Vice President of  
2 Operations, Mr. McLendon, and again, we think that has  
3 been a very positive action and very beneficial in many  
4 areas.

5 Our training section has been reassigned to  
6 report directly to the Vice President of Nuclear  
7 Operations, Mr. Maurin, and we have obtained the  
8 services of Dr. Zena Sabri, formerly with Iowa State  
9 University, whom I am sure some of you know, to head up  
10 our training section.

11 We restructured our Safety Review Committee to  
12 provide a broad base of experience and expertise and, I  
13 guess you can say, independence from the day-to-day  
14 operations of the plant. In addition to the eight  
15 managers of LP&L on the committee, we have the Vice  
16 President of the Nuclear Activities Section of Middle  
17 South Services, in addition to three outside members,  
18 and of course they are Dr. Joe Hendrie, whom you are  
19 familiar with, now located at Brookhaven National  
20 Laboratories, Bill Lowe from Washington, here with  
21 Pickett, Lowe & Garrett, and of course, Bob Douglas, who  
22 was formerly plant manager of Calvert Cliffs and now  
23 quality assurance manager of Baltimore Gas and  
24 Electric.

25 So I guess you can say in summary that we

1 believe we have reacted to your report very positively  
2 and very expeditiously, and I hope after the  
3 presentations that are made today, that you will agree  
4 that we have made significant progress.

5 We have a full agenda, I think you can see  
6 from your information, and certainly I will be happy to  
7 answer any questions that you have of me now.

8 MR. WARD: Any questions for Mr. Wyatt?

9 Thank you very much.

10 MR. MC LENDON: Good morning. I am Gerald  
11 McLendon, Senior Vice President-Operations, Louisiana  
12 Power and Light Company. I would just like to put our  
13 agenda slide up for just a few minutes.

14 (Slide)

15 You have already heard from Mr. Wyatt. I will  
16 cover corporate overview. Lou Maurin will cover the  
17 nuclear operations; Fred Drummond, project support; Dr.  
18 Sabri, training; Joe Sleger, administrative services;  
19 Dave Lester, plant staff; Tom Gerrets, quality  
20 assurance; Dr. Iyengar, RVLM system; and then I will  
21 have a few closing remarks.

22 (Slide)

23 The three items that I will cover are the  
24 overall corporate organization, responsibility and  
25 authority of our vice president in the Nuclear

1 Operations Department, and the corporate commitment to  
2 the Nuclear Operations Department.

3 (Slide)

4 This is our overall corporate chart. Mr.  
5 Wyatt is President and Chief Executive Officer and  
6 reports to the Board of Directors. He has reporting to  
7 him the Vice President and Treasurer, Secretary and  
8 Controller, the Government and Public Relations, and  
9 Vice President of Administration.

10 In addition, I also report to Mr. Wyatt as  
11 Vice President -- Senior Vice President of Operations.  
12 I have reporting to me the Vice President of Consumer  
13 Services, Vice President of our Geographic Divisions,  
14 our Chief Engineer of the company, Vice President of  
15 Power Production-Fossil, Lou Maurin, the Vice President  
16 of Nuclear Operations, Quality Assurance and the Safety  
17 Review Committee.

18 Since last August we have made two significant  
19 changes in our organization chart. When we were here  
20 last August, the Nuclear Group reported to our Vice  
21 Preisident, Power Production. We pulled Nuclear out and  
22 made it a separate department and gave it departmental  
23 status, and it is now headed up by a vice president.

24 As Mr. Wyatt has already mentioned, Lou Maurin  
25 is located on the site, and Nuclear is his sole

1 responsibility.

2                 Also last August, Quality Assurance reported  
3 to the Vice President of Power Production, which is now  
4 Power Production, Fossil. We pulled Quality Assurance  
5 out to give them the independent line of reporting that  
6 is needed for them to have surveillance over both Fossil  
7 and Nuclear.

8                 This is a Corporate Quality Assurance Group.  
9 All the people that report to Mr. Wyatt plus two or  
10 three others that don't report directly to him make up  
11 his staff. We have a meeting once a week to discuss  
12 matters of general interest to the company and discuss  
13 general overall problems.

14                 Once a month Lou Maurin makes a presentation to  
15 the staff to bring them up to date on the nuclear  
16 activities. The purpose of this is to keep them advised  
17 of what is going on to point out any problem areas that  
18 we may have, regardless of what department it is in, and  
19 be able to take corrective action.

20                 In addition to that, he also makes a monthly  
21 report to the Board of Directors. That is to get them  
22 involved and keep them advised of what is going on.

23                 (Slide)

24                 This next chart is a breakdown of the Nuclear  
25 Operations Department. It shows me reporting to, of

1 course, Mr. Wyatt, and Lou Marin reporting to me, and  
2 you will notice that we do have a direct line of  
3 communication from the Nuclear Department to the Chief  
4 Executive Officer in times of critical needs or  
5 emergencies.

6                 Also, as shown on the other chart, Quality  
7 Assurance and the Safety Review Committee report to me.  
8 Reporting to Lou Maurin is the Technical Adviser,  
9 Clarence Wells. Also, the Plant Manager, the Nuclear  
10 Administrative Services Group, the Project Support Group  
11 and Training.

12                 We have had a lot of discussion in the past  
13 about the authority of the Vice President of Nuclear  
14 Operations and whether or not he has the authority to  
15 get the job done. We feel like he does. He has the  
16 authority to hire and fire, he has the authority to hire  
17 outside consultants, he has the authority to purchase  
18 materials, supplies and equipment, and we think he has  
19 all the authority that he needs to get this plant  
20 constructed and get it in operation and have it  
21 maintained safely.

22                 There are some areas that he does not have  
23 authority over, and that is to change the budget, to  
24 promote people in supervisory levels or to change his  
25 organization chart, and, of course, to deviate from

1 company policy. But Lou Maurin does have the support of  
2 LP&L, and I believe he has all the authority that he  
3 needs to carry out his responsibilities.

4 I spend about 50 to 75 percent of my time  
5 involved in our nuclear activities. LP&L is committed  
6 to a staff of competent, qualified -- I will say  
7 requalified employees to safely operate this plant.

8 That concludes my remarks, and I will be glad  
9 to answer any questions that you might have.

10 MR. WARD: Are there any questions?  
11 Frank?

12 MR. BINFORD: I am a little concerned about  
13 this dotted line which says direct communications during  
14 emergencies between Nuclear Operations Vice President  
15 and the President and Chief Executive Officer. Who is  
16 in charge in the case of an emergency? Is there any  
17 chance that you will get conflicting opinions and one  
18 thing and another.

19 I am aware of the fact that there was a great  
20 deal of talk about upper management being aware of what  
21 was going on and being interested in what was going on  
22 following TMI.

23 MR. MC LENDON: Lou Maurin is in charge.

24 MR. BINFORD: All I want to make sure is that  
25 the people presumably in the know are the ones who are

1 running the show if you have an emergency and that there  
2 is no conflict of instructions here.

3                   MR. MC LENDON: What this line is intended to  
4 show is that if Lou feels like he needs to go to the  
5 Chief Executive Officer for any reason, whether I am  
6 there or not, he has that privilege.

7                   MR. BINFORD: That is what I assumed it  
8 meant. I just wanted to be sure in my own mind that  
9 there was no situation here where he could be reporting  
10 to two bosses in an emergency situation.

11                  MR. MC LENDON: I don't think that problem  
12 will exist.

13                  MR. BINFORD: Thank you.

14                  MR. BENDER: Mr. McLendon, I think we are all  
15 aware that Mr. Maurin is not a man with extensive  
16 nuclear operations experience, although I am sure he is  
17 a very competent individual and a very excellent manager  
18 or you wouldn't have put him into this position.

19                  How do you envision your organization dealing  
20 with the technological questions that seem to always  
21 show up and have to be passed along to the President and  
22 the Board of Directors in terms of we have to spend  
23 money for this or we have to improve the way in which we  
24 operate in some way? I don't see a good chain of  
25 communications there that presents that story. Is Mr.

1 Maurin able to build his expertise in the time that is  
2 needed to the point where he is comfortable with that?

3 MR. MC LENDON: I think he is. In addition to  
4 that, he is a technical adviser that has -- Clarence,  
5 you may have to help me on this - I think, nine years of  
6 commercial nuclear experience, you know, as well as the  
7 other people that report to him.

8 MR. BENDER: Well, I am not trying to do more  
9 than just emphasize the need to be sure that he himself  
10 is building that capability. I think the adviser is a  
11 useful tool, but all of us know that advisers are  
12 advisers and they don't manage, and it seems to me  
13 somewhere along the way there has to be some assurance  
14 that the knowledge that needs to be developed in order  
15 to be sure that the whole organization has direction is  
16 built fairly rapidly.

17 I am still a little concerned about how  
18 effective that communications capability is.

19 MR. MC LENDON: Well, I agree that it has been  
20 built rather rapidly in some areas. In other areas, you  
21 know, we have long-time people in those jobs. It is  
22 something that of course we are concerned about, too,  
23 but I believe that we are on top of it.

24 MR. MAURIN: Mr. McLendon, may I make a  
25 comment there?

1           I am Lee Maurin, Vice President, Nuclear  
2 Operations. Dr. Carbon, I feel confident in presenting  
3 the situations that you described before the Board of  
4 Directors. Beyond that, I have had fairly long power  
5 plant experience. I came to work for Louisiana Power  
6 and Light Company in 1950 and I have been in all phases  
7 of power plant operation since that time.

8           First I had some operations experience, I was  
9 in the maintenance group, I was in production  
10 engineering for a number of years, I went back as a  
11 plant manager at one of the fossil plants, and so  
12 forth. My involvement with Waterford 3 has been since  
13 1971, and of course in that time I have picked up quite  
14 a bit of the nuclear technology.

15           In addition to that, we are doing other  
16 things. We are visiting operating nuclear power plants  
17 on a monthly basis. Within the last two months I have  
18 spent a full six days in the nuclear simulator at  
19 Combustion Engineering, and as time goes on and as we  
20 approach operation, I expect to improve my capabilities  
21 even more.

22           MR. BENDER: When you added the training  
23 manager to your staff, what did you envision as being  
24 the responsibility of the training manager? Are we  
25 going to hear that? I know we are going to hear a

1 presentation from the training manager, but I am  
2 interested in what the management viewpoint is.

3               MR. MC LENDON: That she would organize the  
4 department and bring on board the necessary people to do  
5 the training and set up the training program and have it  
6 conducted under her supervision.

7               MR. BENDER: What do you perceive the training  
8 program to accomplish for you? That is the point I am  
9 trying to ask.

10              MR. MC LENDON: Okay. In my view the training  
11 program will start with entry level people all the way  
12 up through the nuclear organization and give them the  
13 training that they need in order to operate this plant  
14 safely.

15              MR. BENDER: Thank you.

16              MR. WARD: Did that answer your question?

17              MR. BENDER: I will hear more about what the  
18 training manager thinks the training manager is supposed  
19 to do. I was interested up to this point in what the  
20 management thought the training function was. It is  
21 pretty general right now but we will hear how it is  
22 being interpreted.

23              MR. WARD: I suspect what you are driving at  
24 is the direct responsibility of the training director,  
25 does it include professional level training of this sort

1 that Mr. Maurin was suggesting he has been undergoing  
2 himself.

3 MR. BENDER: Among other things, I think that  
4 is one of the points that needs to be addressed.

5 MR. MC LENDON: Yes, in my opinion it does.

6 MR. WARD: Thank you.

7 Are there any other questions for Mr.  
8 McLendon? Okay, thank you, sir.

9 Let's go on to the next speaker.

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1                   MR. MAURIN: Good morning. I am Lee Maurin,  
2 and I'm Vice President-Nuclear Operations with Louisiana  
3 Power and Light Company.

4                   (Slide.)

5                   My remarks will be essentially on these  
6 subjects. I would like to talk about the organization  
7 and changes since we last met with you back in August  
8 and make a comparison of our present organizational  
9 structure with that which has been recommended in  
10 NUREG-0731. And I would like also to speak to our  
11 recruiting and staffing effort.

12                  First of all I want to, however, remind you or  
13 emphasize what Mrs. Black had mentioned, and that is the  
14 fact that the schedule for Waterford-3 for fuel load  
15 which was on October 16th when we last met with you is  
16 now scheduled for January the 16th, or about a  
17 three-month delay.

18                  I think that's significant in evaluating all  
19 of the things that remain yet to be done. I hope in  
20 this presentation to convince you, as we are convinced,  
21 that we have in place an organization that's capable of  
22 safely and efficiently operating Waterford-3.

23                  (Slide.)

24                  When we met back in August this was the  
25 organization that existed, and at that time I reported

1 to Don Aswell, who was Vice President of Power  
2 Production. And you will notice that there were three  
3 groups within the Nuclear section at that time. The  
4 plant training and training was headed by an engineering  
5 supervisor, and the Waterford-3 project offsite support  
6 project group. At that time Nuclear was not a  
7 department within Louisiana Power and Light Company.

8 (Slide.)

9 Now our organization looks like this. And as  
10 Mr. McLendon said, this is a direct result of the  
11 expanding effort within Louisiana Power and Light both  
12 in the fossil and nuclear areas. And it was determined  
13 that both fossil and nuclear needed individual attention.

14 Louisiana Power and Light is in the process  
15 now of building its first coal-fired plant, so Mr.  
16 Aswell was given the responsibility for all the fossil  
17 generation, and I was given the responsibility for the  
18 nuclear, what now has become a department. So in my  
19 present role I have the authorities and responsibilities  
20 of a vice president, and in addition to that the  
21 authorities and responsibilities of a department head  
22 within Louisiana Power and Light Company.

23 Those authorities and responsibilities which  
24 Mr. Aswell had in relation to nuclear were passed on  
25

1 directly to me. All of these things down here, the  
2 different groups, will be addressed individually by the  
3 group heads, but let me just remark briefly on that now.

4           Rather than the three groups as before we now  
5 have four groups: Plant Operations, Nuclear Project  
6 Support, Nuclear Training, and Nuclear Administration  
7 Services.

8           As pertains to Nuclear Administration  
9 Services, it was recognized that this was a group that  
10 people in clerical, document control, materials stores,  
11 security and things like that had common goals, so that  
12 would be an adequate reason to group these people into  
13 one group. But in addition to that, we determined that  
14 our other managers were devoting too much time to that  
15 effort, and so this was a way of unburdening them from  
16 those duties.

17           (Slide.)

18           The Administrative Services group is headed up  
19 by Joe Sleger, who you will meet later. Mr. Sleger is a  
20 retired colonel from the U.S. Marine Corps. Having  
21 retired, his first jobs were in QC, and as it turns out,  
22 with the contractor at Waterford-3 where he progressed  
23 rapidly to manager. Recognizing his abilities,  
24 Louisiana Power and Light obtained his services, and he  
25 has been with Louisiana Power and Light now about a year

1 and a half and has progressed, as you see, again very  
2 rapidly in recognition of his abilities.

3 (Slide.)

4 To get back to this slide, Nuclear Training,  
5 which as you will remember before was headed by an  
6 engineering supervisor, is now headed by a director, a  
7 higher position. And we have been very fortunate to  
8 obtain the services of a very experienced and competent  
9 training director. And what we hope to accomplish from  
10 this, and I'm confident that we will accomplish, is not  
11 only will we get the training that will enable us to  
12 pass the regulatory requirements, but we are going to  
13 achieve the requirement or the training that will assure  
14 Louisiana Power and Light that Waterford-3 is being  
15 operated and maintained by competent individuals.

16 Both in recognition of the exposure to the  
17 public and of course in recognition of the exposure to  
18 the company as well, the financial exposure in the event  
19 there's an accident such as TMI, we cannot afford to  
20 have other than well-trained individuals.

21 (Slide.)

22 To tell you a little bit about Dr. Sabri, you  
23 notice that Dr. Sabri received her Ph.D. in nuclear  
24 engineering in 1972. She was with Iowa State University  
25 for some nine and a half years, I believe, and was a

1 professor in nuclear engineering when she came with  
2 Louisiana Power and Light, and then she had been a  
3 member of these other prestigious and respected groups  
4 within the industry. Dr. Sabri is well known for her  
5 expertise in training as well as in human factors.

6 (Slide.)

7 And these things also.

8 (Slide.)

9 There are but two other group heads, those  
10 being Dave Lester and Fred Drummond. Dave Lester is  
11 plant manager. He has been with Louisiana Power and  
12 Light now for about eleven and a half years. He is an  
13 Annapolis graduate and a veteran of the submarine force  
14 in the Navy. He has been associated with Waterford-3  
15 for some eleven years and has been plant manager for two  
16 and a half years, and is a very competent individual.

17 In Nuclear Project Support we have Fred  
18 Drummond. Fred has been with Louisiana Power and Light  
19 six and a half years. He came to us also from the  
20 nuclear Navy and submarines. He was discharged as an  
21 officer. He progressed in recognition of his ability --  
22 he has progressed very rapidly through Louisiana Power  
23 and Light Company. He has been on this project for  
24 about five and a half of the six years, and he has been  
25 in his present position for two and a half years and is

1 working hard now to establish -- and we think he has --  
2 the core of that organization to provide the support for  
3 Waterford-3, the offsite support for Waterford-3.

4 (Slide.)

5 Just to make a quick comparison of our  
6 organization chart with that suggested in NUREG-0731, we  
7 feel that our chart is stronger than this chart in two  
8 principal areas, and that is that QA reports directly to  
9 the Senior Vice President, and training has been given  
10 much more prominence and importance in our own  
11 organization than in this one.

12 (Slide.)

13 There was mention made also this morning as to  
14 how in putting this organization together the people  
15 would understand their relationship within that  
16 organization. We are accomplishing that by putting  
17 together a management control system, which is really  
18 derived from our own in place LP&L corporate policy,  
19 from industry standards, from regulatory guides to then  
20 form a program manual. So each program states an  
21 objective, gives references, assigns responsibilities  
22 for carrying out the program, gives program description  
23 and then a way of evaluating the program on a periodic  
24 basis to see that that program is being effective. Of  
25 course, from this program will come certain procedures,

1 plans, teams, and so forth.

2 (Slide.)

3           The status of this effort now is that we  
4 anticipate a total number of programs of 129. We have  
5 currently approved 22. And these are some typical  
6 programs. But the programs would be both  
7 administrative, managerial and technical in nature so  
8 that people do understand what they're supposed to do  
9 and that people understand how they fit into the overall  
10 organization.

11           (Slide.)

12           Since we last met with you we have undertaken  
13 a very energetic recruiting program, and since February  
14 -- or from November 1st of 1980 through February the  
15 20th, 1982 this is what this program has done.  
16 Interviewed 869 candidates, made job offers to 304  
17 people, and 162 have accepted. At one time we had five  
18 full-time recruiters with three of these being  
19 consultant professional types. We now have four in a  
20 continuing effort to bring on board not just numbers of  
21 people but qualified people. Three of those four are  
22 again consultants, people with acknowledged expertise in  
23 these areas. We feel that this program has been very  
24 successful.

25           (Slide.)

1           To refresh your memory, when we last met with  
2 you in August the approved staff was 312, and we had on  
3 board 198 LP&L people.

4           (Slide.)

5           Compare that now to our present situation in  
6 which we have authorized in this overall group 426, and  
7 that was up from 312. And we have on board, and again  
8 LP&L employees and competent, qualified LP&L employees,  
9 we believe, 316, or a net increase of about 74 percent.

10          Mr. Ward, I think you asked a question as to  
11 what makes up the deficit, is it contractors? The  
12 answer to that is of course yes, but it goes even beyond  
13 that. We now have on board in the form of contractors  
14 -- and I'm lumping people like startup engineers,  
15 consultants, startup electricians, technicians and so  
16 forth -- to the tune of about 500 to assist us in this  
17 effort. So it's not just making it to this number, but  
18 we've got to go way beyond that in order to do  
19 everything that's required to be done.

20          One of the things that has to be recognized is  
21 that at this stage of the game with the training  
22 requirements, the necessary training requirements, our  
23 people cannot devote full time to just checking out and  
24 starting up Waterford-3. They also have to be in  
25 training to fulfill the training requirements and to

1 reach the competence that we know is going to be  
2 required. For instance, in STA training there are some  
3 15 individuals full time now. They have no other duties  
4 but that.

5 MR. WARD: Mr. Maurin, are some of those --  
6 the 500 -- actually assigned to LP&L slots? Are they  
7 all in separate startup organizations?

8 MR. MAURIN: There are some, Mr. Ward -- and I  
9 think Dave will address this in more detail -- who are  
10 assigned to LP&L slots; for instance, the engineer in  
11 charge of the plant engineering group, the nuclear  
12 engineer, and then in Fred Drummond's group there are  
13 some individuals who are assigned in consulting  
14 capacities.

15 Some of these positions are -- it looks like  
16 have been very, very difficult to fill. I don't think  
17 that we quite have a handle on exactly why we have been  
18 unable to fill these positions. But of course with the  
19 deteriorating housing situation and the industry salary  
20 levels going up as a whole, these are complicating  
21 factors now in filling these positions.

22 We have not given up, though. I don't want to  
23 give that impression. We are still out energetically  
24 seeking these people, recruiting these people, and we  
25 hope to have them in just as quickly as possible.

1           We will also, if we get them in somewhat late  
2 by someone's subjective standards, we will keep our  
3 present consultants with them for some time to provide  
4 the continuity in training so that they grow into the  
5 job.

6           MR. BENDER: Mr. Maurin, where does the  
7 responsibility for writing operating procedures fit?

8           MR. MAURIN: Each group is responsible largely  
9 for writing its own operating procedures. The operating  
10 procedures of necessity, because of all the other things  
11 that need to be done, have been largely written by  
12 consultants. However, all of the operating procedures  
13 have been reviewed and commented on by our own people,  
14 and every procedure is approved -- every plant  
15 procedure, for instance, is approved by PORC.

16           MR. RAY: Before you take that off, Mr.  
17 Maurin, where do the STAs fit in, under plant operations?

18           MR. MAURIN: Mr. Ray, there is a combination.  
19 There are some engineers from plant operations who are  
20 in STA training. There are some from Fred Drummond's  
21 group, both in the operational phase of it and the  
22 construction phase of it, who are in STA training.  
23 Ultimately, the STA program will be under the so-called  
24 STA coordinator which is, in my opinion, a high level  
25 position, and I would have thought that this would have

1 been a very desirable position.

2                 This individual has no direct line authority,  
3 but he has the responsibility and authority for the STA  
4 program. And I would have thought that this would have  
5 been a challenging job and a desirable job. We've had a  
6 very difficult time in filling that position.

7                 MR. RAY: Who will that coordinator report to?

8                 MR. MAURIN: That coordinator will report to  
9 the assistant plant manager-operations and maintenance.

10                MR. RAY: And from the viewpoint of the status  
11 of your STA assignments, do you have in training now for  
12 that role all that you anticipate you will need at  
13 startup, or are there still STA assignments to be made?

14                MR. MAURIN: We believe we have in training  
15 now enough to fill the role at startup, and we believe  
16 that they will be competent at startup. We would also  
17 be prepared, however, to bring in consultants with  
18 experience in this area to assist them in their gaining  
19 experience, period.

20                MR. RAY: And what's your anticipation now  
21 from the viewpoint of some of the critical functions  
22 that I mentioned earlier, for instance, health physics?  
23 Your chart shows you have 14 years, so you're about 50  
24 percent. That seems hardly enough to go on line with  
25 the plant if you need 27.

1                   MR. MAURIN: This chart was just increased,  
2 Mr. Ray. It was a situation where there was a chart  
3 authorized with the instruction that we approach filling  
4 that chart, then let's take another look at it as to  
5 possible expansion. We reached that condition just  
6 recently. The request was made to further expand the  
7 organization and so this was authorized. We have a high  
8 degree of confidence now that a goodly number of these  
9 will be filled within the next few months.

10                  MR. RAY: Well, there's a significant shortage  
11 of such competence industrywide, and therefore, I have  
12 misgivings on your point. Suppose you approach fuel  
13 loading and you have not materially increased your  
14 complement in terms of the approved number. Do you know  
15 of any consulting services that might be available to  
16 you with sufficient experience to rely on them to  
17 temporarily fill this out?

18                  MR. MAURIN: Mr. Ray, I think really in order  
19 to give you a better answer I should call on Dave Lester.

20                  MR. RAY: Well, when he is up.

21

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1                   MR. WARD: I would comment on this chart.  
2 You've really set yourself a challenge. You're up to  
3 the staffing level that you found was full staffing last  
4 August. But you've just said you need 110 more people  
5 than you did back then.

6                   MR. MAURIN: Well, we continue to evaluate the  
7 situation, and as we do we identify need for additional  
8 people. I think that's a plus factor rather than just  
9 setting level and not looking at it again.

10                  MR. WARD: Well, I agree.

11                  Do you have a feel for or knowledge of the  
12 staffing levels at other plants? Is the 400 similar to  
13 what other nuclear plants you're familiar with have?

14                  MR. MAURIN: As you know, it's very difficult  
15 to make those comparisons.

16                  MR. WARD: Yes, it is.

17                  MR. MAURIN: But my own feeling is that we are  
18 approaching a level that appears to be average or  
19 adequate, as judged by other utilities. I think that we  
20 are going to need a few more people, but I don't  
21 anticipate a need for a great deal more training. We  
22 would anticipate that that would have to be increased,  
23 and Dr. Sabri is going to make a statement on that when  
24 she gives her presentation.

25                  MR. WARD: Mr. Carbon?

1                   MR. CARBON: Mr. Maurin, I have three or four  
2 questions I'd like to ask. It was stated that you have  
3 the authority and the wherewithal to do the job, so to  
4 speak. Suppose you become dissatisfied with one of your  
5 own managers? And let me just arbitrarily say Mr.  
6 Drummond, whom you feel is not doing the job.

7                   How do you go about -- how much authority do  
8 you have to replace him? What do you have to do, to go  
9 through, if you're dissatisfied with his performance?

10                  MR. MAURIN: If such a thing ever became  
11 necessary, then that is a situation that I would discuss  
12 with Mr. McLendon and Mr. Wyatt and a determination then  
13 would be made from those discussions within Louisiana  
14 Power & Light. I have the authority at any time, and  
15 without talking about any particular individual, but I  
16 may at any time suspend an individual on the spot. If  
17 an individual shows up drunk, under the influence of  
18 drugs or otherwise incapable of performing his function  
19 or is in need of disciplinary action, I may tell the  
20 individual to leave the company premises immediately and  
21 we'll get back in touch with him.

22                  All right. And then from that, then, there  
23 would be -- I would want to bring in other people, since  
24 that is such an important thing, the determination as to  
25 whether to fire someone being so important, that I think

1 I would want to get other advice in those categories --  
2 in those situations. And the procedure as set up by  
3 Louisiana Power & Light permits that.

4 I like that procedure very much. I do not  
5 like a manager or anybody having the authority to fire  
6 unilaterally. I think it's better to consult, and this  
7 gives you all the advantages of having the authority to  
8 fire immediately.

9 MR. CARBON: If you were dissatisfied with his  
10 stand on some technical issue, would you have any  
11 problem in overriding him if you thought it necessary?

12 MR. MAURIN: No.

13 MR. CARBON: Let me go to another question.  
14 I'd like to get some appreciation of how much you  
15 personally have got involved in some of the technical  
16 matters. And let me ask, how much effort and time have  
17 you devoted to looking at WASH-1400 to see what it says  
18 and what the significance of it is, or how much time  
19 have you devoted to PRA studies, not so much in terms of  
20 what exact numbers come out but what it means in terms  
21 of likely problems in systems engineering and so on?

22 MR. MAURIN: Dr. Carbon, some time back I read  
23 the executive summary for WASH-1400. Since that time,  
24 of course, I have done visiting in operating nuclear  
25 plants. A week on the simulator assisted me in

1 evaluating the kinds of things that are brought out in  
2 WASH-1400. And beyond that, I have scheduled with Dr.  
3 Sabri some sessions for her to educate me more fully on  
4 WASH-1400 and in the probabilistic risk assessment  
5 methods.

6 MR. CARBON: Well, I think the executive  
7 summary itself leaves considerable questions in one's  
8 mind. Have you delved into any other aspect of the  
9 study?

10 MR. MAURIN: I have not. But as I say, I do  
11 plan to do that by way of, in effect, asking Dr. Sabri  
12 to walk me through the thing.

13 MR. CARBON: You've spoken of going to other  
14 operating plants. Could you be a little more specific  
15 on what kind of liaison you personally may have had with  
16 middle and upper level management people at other  
17 operating CE plants similar to yours?

18 MR. MAURIN: I know the management at St.  
19 Lucie. I have visited St. Lucie on three or four  
20 occasions, and I believe the last visit being in  
21 December, when I spent three or four days there.

22 I know the management at Calvert Cliffs and  
23 spent two or three days there, I believe in October,  
24 October or November. And of course, Bob Douglas, who is  
25 QA manager for Baltimore Gas & Electric, is on our

1 safety review committee.

2                   And then of course our sister company,  
3 Arkansas Power & Light, has a CE plant, and this is  
4 where I've been spending most of the time.

5                   MR. CARBON: When you say most of it, how much  
6 time? Could you give me a feel for how much you spend  
7 there?

8                   MR. MAURIN: I'm trying. In the formal part  
9 of the program, I think I made three visits to ANO, for  
10 a total of perhaps ten days. And I would hope to on a  
11 continuing basis spend about three days a month in an  
12 operating nuclear power plant.

13                  MR. CARBON: Do you have any informal or  
14 formal, or any sort of arrangement to learn about the  
15 technical problems that are coming up, the license  
16 events of significance at the other CE plants, so that  
17 you can profit from them at yours?

18                  MR. MAURIN: We have in the formative stage  
19 now within Louisiana Power & Light two groups under Fred  
20 Drummond, one being the ISEG, independent safety  
21 engineering group, being formed, and this is under an  
22 individual with experience in an operating nuclear power  
23 plant. And I believe now he has three people under  
24 him. Is that correct, Fred?

25                  MR. DRUMMOND: There are four slots. He has

1 hired two people.

2 MR. MAURIN: In addition to that, there is an  
3 operational assessment group also under this individual,  
4 which is in the formative stage. And then this is going  
5 to be tied in with the training effort under Dr. Sabri.  
6 And I would anticipate that really the information that  
7 I would get from these combined programs would be  
8 through the training effort.

9 We have the safety review committee now going  
10 and we meet once a month, and we have now formed task  
11 forces or subcommittees in there. One of them is on  
12 risk analysis and this is headed by Mr. Lowe, Bill  
13 Lowe. And we are just getting this going. But our next  
14 safety review committee meeting is toward the middle of  
15 this month, and we hope on the day before for this  
16 little committee to meet. And I anticipate a lot of the  
17 kinds of things that you are talking about coming from  
18 them.

19 MR. CARBON: All right, thank you.

20 Will we hear more about Mr. Wells'  
21 background?

22 MR. MAURIN: Yes. I can tell you about that.  
23 Clarence Wells was with Floriday Power & Light Company  
24 and had about 27 years with Florida Power & Light  
25 Company. He had five years as a shift supervisor

1 holding an SRO, mainly at Turkey Point, and then moved  
2 to St. Lucie as operations manager, operations  
3 superintendent, where he held that position for five  
4 years.

5 Clarence Wells has been an invaluable addition  
6 to our organization. Not only has he helped me, but he  
7 has helped the whole project. He is a very, very  
8 capable individual.

9 MR. CARBON: He reports directly to you?

10 MR. MAURIN: He reports directly to me.

11 MR. CARBON: What sort of tenure does he have  
12 with you? Is he with you another six months or five  
13 years?

14 MR. MAURIN: We have an oral understanding  
15 that he will stay with us for at least a year after  
16 commercial operation.

17 MR. CARBON: Thank you.

18 MR. BENDER: Mr. Maurin, a couple of points  
19 that came up earlier I'd like to get some clarification  
20 on. How do you envision Mid-South services contributing  
21 to your operation?

22 MR. MAURIN: I don't know that I can answer  
23 that completely, and I meant to touch on that. Middle  
24 South right now helps us in areas primarily relating to  
25 fuel management, to core physics, to core design and

1 design of NSSS system. In addition to that, they help  
2 us out in industry groups by participating for us in  
3 some cases on industry groups and owners groups,  
4 although we are also members of some of those groups.

5 Middle South also assists us in QA, does QA  
6 audits of our own QA program, and helps us out a lot in  
7 the fire protection, fire prevention areas. They have  
8 quite a competent group over there.

9 I don't believe that it's really known now  
10 exactly what MSS' final contribution will be. Of  
11 course, Middle South is a holding company that owns also  
12 Louisiana Power & Light, Mississippi Power & Light,  
13 Arkansas Power & Light, and New Orleans Public Service.  
14 And three of those companies have the responsibility for  
15 operating nuclear power plants.

16 There is a study going on at present to try to  
17 determine what the role for Middle South should actually  
18 be, what is the proper role.

19 MR. BENDER: Let me ask another question which  
20 I think you almost dealt with a minute ago. The  
21 industry supports a considerable amount of research and  
22 study work through owners groups and through EPRI, who  
23 has the responsibility for keeping track for what's  
24 going on.

25 MR. MAURIN: With Red Drummond's group.

1                   MR. BENDER: So Mr. Drummond should know about  
2 things that are relevant to Waterford that might be  
3 going on in those groups.

4                   MR. MAURIN: Yes.

5                   MR. BENDER: Okay. I'll wait until Mr.  
6 Drummond gets on the podium and we'll ask him a couple  
7 of questions. I will ask one other thing, though.

8                   I believe the last time that I had the  
9 opportunity to hear about Waterford you were in the  
10 throes of doing some development of computerized kinds  
11 of control capability. Where does that stand and what  
12 attention is being given to it?

13                  MR. MAURIN: The overall computer effort, as  
14 you can understand, is a very large effort, and we have  
15 a very large force in place now with LP&L and  
16 contractors to get the system operable by fuel load.  
17 The demands or our desires in the system are such that  
18 we do not believe that we are going to have the final  
19 system in at fuel load. But we will have a lot of the  
20 system in by fuel load.

21                  We would not anticipate abandoning the  
22 continuing effort on the computer after fuel load, and I  
23 personally am still optimistic that we are ever going to  
24 find computer systems for Waterford 3.

25                  MR. BENDER: Well, I have no doubt that you

1 will.

2 I think our Committee was pleased with the  
3 idea that this approach has been developed by the  
4 initiatives of the Waterford organization. At the same  
5 time, I think there is some sensitivity on my part to  
6 the importance of a system like that being functionally  
7 effective and being reliable and having a way of showing  
8 that it contributes to safety and doesn't introduce  
9 safety problems.

10 Where is the responsibility assigned for  
11 making sure that it provides an improvement in safety  
12 and doesn't create safety problems?

13 MR. MAURIN: The ultimate responsibility would  
14 have to be with the nuclear operations department. But  
15 the lead in putting the system together is with LP&L's  
16 engineering services group, a group which is in another  
17 department in Louisiana Power & Light.

18 MR. BENDER: I think it's worthwhile to think  
19 about what the interrelationships are between those two  
20 functions you have defined. After being enthusiastic  
21 about the idea, I think I've had some second thoughts  
22 about how well the people who are doing it really know  
23 what they're taking on, and I'm sure you've had some  
24 thoughts about that, too, as all people do when they  
25 start thinking about computers.

1                   MR. MAURIN: A large computer system is a  
2 massive effort. It's a project in itself.

3                   MR. WARD: Mr. Carbon?

4                   MR. BENDER: I'd like to ask one more  
5 question. I know down further in the agenda there's a  
6 discussion on the water level instrumentation. Have you  
7 personally been much involved in the technical aspects  
8 of looking at your water level instrumentation problem,  
9 what they do, what they don't do, your need for them,  
10 and so on?

11                  MR. MAURIN: From a broad overview I think  
12 that I am familiar in general as to what has occurred  
13 here. But I can't say that I have sat in on any  
14 technical meeting dealing directly with that situation.

15                  MR. CARBON: Fine. Thank you.

16                  (Slide.)

17                  MR. MAURIN: Back in April of 1981 a  
18 commitment was made to Harold Denton to bring on board  
19 some 45 key individuals. We feel that we have been  
20 largely successful in that effort, in that 41 of those  
21 individuals are on board.

22                  But you will note, however, that there are  
23 still one, two, three, four, five, blank spaces, and of  
24 course the reason for that is that we have one more  
25 operator than we had committed for. But as I mentioned

1 before, some of the jobs that are particularly difficult  
2 to fill -- and we don't quite understand the reason --  
3 is the plant engineering department supervisor, the  
4 station engineering supervisor, and the STA engineering  
5 supervisor.

6           These two positions -- or this off-site  
7 training supervisor, we hope to fill that very shortly.  
8 This position here was recently vacated by the promotion  
9 of Joe Sleger from the position, and so we hope to fill  
10 that in the very near future.

11           I want to point this out, that we now do have  
12 six nuclear operations supervisors, six shift  
13 supervisors who have had commercial experience and have  
14 held either an RO or an SRO. In addition to that, we  
15 have one shift supervisor who is a college graduate, a  
16 veteran of the Navy, was an officer and held STA status  
17 at another plant. So we believe that we are in fairly  
18 good shape there.

19           Our operations superintendent held an SRO and  
20 was a shift supervisor in an operating nuclear power  
21 plant. And our assistant plant manager, operations and  
22 maintenance, also had many years in a nuclear power  
23 plant. Dave Lester will go into that in more detail.  
24 But I believe now that we have the core organization,  
25 the experience that will permit us to operate and

1 maintain this plant in an efficient and safe manner.

2 (Slide.)

3 Just quickly to look at the nuclear experience

4 within Louisiana Power & Light, total nuclear includes,

5 of course, these other two categories. And then

6 commercial nuclear also includes commercial operation.

7 The total nuclear would be military and would also be

8 the time spent on Waterford 3 or in other plants.

9 Commercial nuclear would be the experience in commercial

10 nuclear operating plants or in support of such plants,

11 and also the time on Waterford 3. Commercial

12 operations, however, is the time that was spent in

13 commercial operating plants.

14 (Slide.)

15 In conclusion, we believe and are firmly

16 convinced that we have now structured an organization

17 which, first of all, recognizes the magnitude of the

18 problem. I don't think anybody has to tell us how big a

19 job it is getting a nuclear power plant into operation.

20 We have an organization capable of managing and

21 controlling all respects of Waterford 3 in a safe and

22 efficient manner, including all of this, which will

23 bring us right up through plant operation.

24 We have an organization which appreciates and

25 emphasizes the importance of training and has the

1 requisite experience to operate Waterford 3 safely. And  
2 of course, we concur in the conclusion of the staff's  
3 audit in December of 1981 and we were very gratified at  
4 the result of that audit, and we believe as they do that  
5 LP&L's management capabilities are adequate to direct  
6 and support safe operations of Waterford 3 and that  
7 management is committed to assuring safe operation of  
8 Waterford 3.

9 MR. WARD: Mr. Pearson?

10 MR. PEARSON: Yes. Mr. Maurin, your second  
11 vugraph showed under administration a director of  
12 personnel, and you've been talking about recruiting for  
13 Louisiana Power & Light. Is this person involved in the  
14 recruiting? I'm not clear of --

15 MR. MAURIN: Yes, Mr. Pearson, our director of  
16 personnel is directly involved in it and has contributed  
17 greatly. There is an LP&L individual who heads up that  
18 effort. That individual, although he is domiciled at  
19 Waterford 3, reports administratively to our director of  
20 personnel.

21 MR. PEARSON: Who is that individual? What's  
22 his title? Where does he fit on the organizational  
23 chart?

24 MR. MAURIN: He fits in our general office  
25 organization chart under the director of personnel, Mr.

1 Pearson. But he is domiciled full time at Waterford 3.

2 MR. PEARSON: All right. Beyond that, I hope  
3 somebody today will address -- I guess I want to say the  
4 area of human resource management. I would, for  
5 example, hope that there is some interaction between  
6 people responsible for recruiting or selection, the  
7 people in personnel, and your new training manager, for  
8 example.

9 My reaction to reading the supplement to the  
10 SER is that the staff review is weak in this area. That  
11 doesn't mean you're weak in the area. But from what I  
12 read on paper I don't see certain things addressed that  
13 I think should be addressed. You talk a lot about  
14 training, but very little about specific training  
15 criteria and feedback mechanisms, methods of program  
16 evaluation involving training, personnel policies,  
17 selection per se, the role of the personnel manager.

18 What I am getting at is that INPO has come out  
19 with a number of documents in recent months dealing with  
20 performance objectives and criteria for plant evaluation  
21 and for corporate evaluations. They have been to  
22 several plants, including one that you mentioned,  
23 Calvert Cliffs, and they have done an employment survey  
24 in September of 1981 that specifically discusses a human  
25 resource management system.

1           And if you or some of your people look at some  
2 of those INPO publications, the kinds of things that two  
3 talk about which are related to the kinds of problems  
4 that existed at Three Mile Island are really not  
5 addressed. I don't know whose fault that is, whether  
6 it's the NRC staff's fault or what.

7           But I would feel much more comfortable in the  
8 review today if those matters were addressed. And as I  
9 say, I'm not very happy with what I've read in the  
10 supplement to the SER.]

11           MR. MAURIN: Mr. Pearson, as relates to those  
12 matters relating to training, I know that Dr. Sabri is  
13 going to address those when she comes up. As to those  
14 criteria, I read both of those and I can't see any area  
15 where LP&L has any problem or serious conflict with  
16 anything there.

17           We have a program now to identify and provide  
18 in adequate numbers competent people for Waterford 3,  
19 and LP&L personnel is directly involved in that. One of  
20 our concerns has to do with continuity of employment at  
21 Waterford 3, and for that reason we would like to  
22 develop some home-grown products, some people who have  
23 allegiance to the area. We have searched out Louisiana  
24 Power & Light for people who have those capabilities and  
25 who are interested in Waterford 3 and we have searched

1 out our sister company, NOPS, also for such people.

2                 Beyond that, we are starting -- have started  
3 -- I'm not saying that it's a finished program, but we  
4 have ongoing now a program to identify local people who  
5 have either the ability or the capability and training  
6 those people then, so that we will have long-term  
7 stability in the force at Waterford 3 and the whole  
8 nuclear operations department.

9                 MR. PEARSON: Well, if I can amplify my  
10 comments, once the brick and mortar is in place and  
11 you've got all the hardware there, to me the major  
12 problem is the people problem. And I don't see the  
13 interaction between those individuals responsible for  
14 personnel activities interacting with the training  
15 people, for example. It's not on paper, anyway.

16                 Specifically, in talking about performance  
17 evaluations or performance appraisal, there is some  
18 discussion about a yearly review. But no system is  
19 described for day to day or periodic performance  
20 appraisal, you know, on the job.

21                 MS. SABRI: I will be discussing that  
22 specifically. I think if you will keep on you will find  
23 in my slides I'm providing selection criteria and making  
24 sure that we keep on making the people happy and wanting  
25 to stay with the organization, such that you can keep

1 the talent and the experience that we have in the  
2 plant. And also, in screening and selection we do have  
3 a very closed loop, you know, between us and personnel.

4 MR. PEARSON: Thank you.

5 MR. WARD: Thank you, Mr. Maurin.

6 I think we need a break. Ten minutes.

7 (Recess.)

8 MR. WARD: We are about an hour behind our  
9 nominal agenda, and that probably isn't a major  
10 problem. We have to be out of the room by 2:00  
11 o'clock. We were originally scheduled to end at 12:30,  
12 I think. What I propose is that we just continue until  
13 we're finished and not take a break for lunch, but we'll  
14 plan on having a late lunch or no lunch.

15 MR. DRUMMOND: Good morning. My name is Fred  
16 Drummond, project support manager. Where I fit into the  
17 organization is highlighted here and I think you've seen  
18 this several times before.

19 Today I would like to talk about my  
20 organization.

21 (Slide.)

22 The items I'm going to talk about are the  
23 organizational functions, my staffing and qualification  
24 experience, personnel review. To start out, I'd like to  
25 talk a little bit about a transition that I've been

1 going through in my mind for really a couple of years,  
2 and we've analyzed it pretty deeply following the last  
3 meeting with the Committee, to really get a handle on  
4 how we are going to make my organization, my  
5 project-oriented organization, is going to make a  
6 transition to supporting an operating nuclear plant.

7 Some of the things I mentioned I was going to  
8 touch upon earlier are the retention of personnel from  
9 design throughout the organization. For instance, like  
10 Mr. Maurin mentioned, Dave Lester has been with the  
11 project for some extended period of time. He has  
12 several people in his staff that started out with the  
13 project, including the health physics engineer, the  
14 maintenance superintendent and the like.

15 I have people in construction. It was a  
16 relatively small group at the time we met last. Three  
17 of those people in the construction group are now in the  
18 STA training program. So we intend to carry that  
19 experience into the operational phase.

20 Quality assurance is the same thing in terms  
21 of -- mine grew by half and my first goal was to get all  
22 of my supervisors in place and then start building my  
23 total organization under it. We put a lot of increased  
24 emphasis on operational support. This is what I was  
25 referring to earlier with the construction engineering

1 group, was to get the group which we have augmented  
2 really interfacing directly with EBASCO Engineering,  
3 such that my operations engineering group can get more  
4 involved with plant engineering and with the process, to  
5 be able to have the capability and, if the capability is  
6 not in house, the knowledge to take the capability  
7 outside of house in terms of modifications and extended  
8 engineering on Waterford 3 as we go into operation.

9                 And we put a lot of focus on planning  
10 activities. In terms of technical management, my  
11 organization's structure over the last year and a half  
12 went from an authorization of about 19 people to an  
13 authorization of 51 people. It dropped back to an  
14 authorization of 15 people.

15                 And I might point out for the record, on one  
16 of Mr. Maurin's slides it showed 33 people in my group  
17 and that should have been 43 people, and that's when the  
18 administrative services organization was developed and  
19 at that point my organization went up to 77, which  
20 includes my secretary and 76 professionals. We've got  
21 functional groups which I'll talk about in a minute when  
22 I show you the organization chart.

23                 We have used contractors. I have contractors  
24 on my staff in the licensing area and the engineering  
25 area, and also in the construction area. When I put my

1 construction people in the STA training program, I had  
2 to augment my liaison. Those people will be leaving  
3 when our people come back out of the STA program, but  
4 there will be some continued involvement with my people  
5 in the startup of Waterford 3.

6 We put a significant amount of emphasis on  
7 training early in 1981 in the offsite group, primarily  
8 generic training, and this will now fall under the  
9 direction of Dr. Sabri.

10 In terms of construction support, we have  
11 emphasized technical staffing, and I think as you will  
12 see by some of the individuals that I have obtained in  
13 our recruiting efforts, we are trying to get expertise  
14 within the organization.

15 Administrative burdens has already been  
16 discussed. Accelerated recruiting has been discussed.  
17 I have two full-time recruiters in my office. Training  
18 once again falls into getting into the support mode, and  
19 Dr. Sabri will be involved in the professional  
20 engineering training and will direct it.

21 Basically, my organization has been built  
22 using first just industry experience, going out and  
23 visiting plants, and information that I obtained over  
24 the last couple of years, and then following INPO  
25 guidance and other industry guidance and the guidance

1 that came out of 0731.

2 (Slide.)

3 Currently my organization is structured as  
4 follows, and the numbers are a little bit higher than  
5 the staff mentioned earlier. I've had some successes in  
6 recruiting. I'm up to 40 people authorized now -- or 40  
7 people hired of the 77 authorized, and the 77  
8 authorization was achieved in September of the past  
9 year.

10 In the licensing area, my supervisor is Roy  
11 Prados. He has been on the project for seven years,  
12 primarily in licensing, with 14 years experience in the  
13 nuclear industry, starting out with Babcock & Wilcox and  
14 then with a consulting firm in Florida.

15 In the technical services area, for the last  
16 couple of years and really since the Combustion  
17 Engineering Owners Group formed, that was under Roy  
18 Prados, but we used Middle South Services quite  
19 effectively in that area and used an individual from  
20 Middle South Services that we all grew quite fond of,  
21 Dr. Iyengar, whom I hired on my payroll from Middle  
22 South. And he carries a lot of experience with him. He  
23 has a B.S. and an M.S. in surgical engineering.

24 Operational engineering is filled by a  
25 long-time individual with the Louisiana Power & Light,

1 about 31 years construction engineering, again a long  
2 time individual with Louisiana Power & Light.

3               Onsite safety review, which has the  
4 independent safety engineering group and the operational  
5 assessment group, the supervisor there is Ray Berski,  
6 who came to us from Duquesne Power & Light at Beaver  
7 Valley. He was there for a total of ten years. He went  
8 through the construction and startup and then through  
9 the operation phase.

10              Then, like I say, I've tried to depict here  
11 the functional organizations, and I think they are  
12 pretty much self-explanatory. The areas that fall under  
13 the technical services area, Mr. Bender, you had  
14 mentioned earlier the owners group that interfaced with  
15 EPRI. Efforts such as that fall within that realm.

16              MR. BENDER: Who nurses the tech specs?

17              MR. DRUMMOND: That's a coordinated effort. in  
18 fact a concentrated effort right now, coordinated  
19 through licensing. But it goes through significant  
20 review and development. It starts out with our  
21 architect-engineer and comes to us. It's on the plant  
22 site now. It's gone through -- our latest tech specs  
23 have gone through significant reviews.

24              Roy Prados has licensing people following it  
25 quite closely. We have a contract licensing engineer

1 that was a senior reactor operator. This helped us  
2 significantly.

3                   MR. BENDER: Let me try to get it in an  
4 operating context. They're still under development.  
5 When they are completed, who is assigned responsibility  
6 for keeping track of their requirements and making sure  
7 that you stay in conformance with them.

8                   MR. DRUMMOND: The responsibility will rest  
9 with the plant staff.

10                  MR. BENDER: Which plant staff?

11                  MR. DRUMMOND: Dave Lester's organization.

12                  MR. BENDER: I see.

13                  MR. DRUMMOND: And the plant operations review  
14 committee, which is one element I'm going to get into  
15 later on in discussing that. But the overall commitment  
16 tracking responsibility and ensuring that things are  
17 followed up and accomplished will be within the  
18 licensing organization. We have an extensive effort in  
19 that area right now.

20                  MR. BENDER: You and Dave Lester will have to  
21 have some kind of interfacial relationship going on all  
22 the time.

23                  MR. DRUMMOND: There will be licensing people  
24 at the plant site on a full-time basis to interface with  
25 operations people.

1                   MR. BENDER: Thank you.

2                   MR. WARD: Fred, the PORV issue which we heard  
3 about earlier, if you haven't already I expect you will  
4 eventually have to be developing a position on that.  
5 Perhaps it would help influence any new requirements  
6 that might come from the NRC or to react to any new  
7 requirements.

8                   Will that activity be centered in your  
9 organization or where?

10                  MR. DRUMMOND: It will be in my organization,  
11 as well as assistance from EBASCO operational  
12 engineering, and Dr. Iyengar will look into that,  
13 primarily because of the interrelation he has had with  
14 the project for the last couple of years.

15                  We have not established a position, nor have  
16 we gotten any real feedback from Combustion Engineering  
17 in that regard.

18                  MR. BENDER: Would your organization be the  
19 one that would be trying to understand the significance  
20 of the Ginna event to Waterford?

21                  MR. DRUMMOND: Yes, sir. The operations  
22 assessment group, which is in my onsite safety review  
23 group, is primarily a coordinating group that will have  
24 capability to do analysis. Dr. Sabri is going to talk  
25 about part of her organization that's going to interface

1 with that.

2           This organization will send out into the  
3 various elements of the total nuclear operation  
4 department licensee event reports, information from INPO  
5 for analysis. But the ultimate coordination of the  
6 responsibility will be within this group.

7           In fact, I will mention it now, with the SRC,  
8 that one practice we have established over the last  
9 couple of months was reviewing within the safety review  
10 committee significant events in the industry. And Ginna  
11 we discussed at the last Committee meeting, and Ray  
12 Berski led that discussion. The supervisor of this  
13 group is on the safety review committee.

14           MR. BENDER: Thank you.

15           MR. WARD: Fred, is this group all at the  
16 site?

17           MR. DRUMMOND: Yes, sir.

18           MR. WARD: So LER's come into the mailroom and  
19 who do they go to then?

20           MR. DRUMMOND: It's not just LER's, but --

21           MR. WARD: Let's take LER's as an example.

22           MR. DRUMMOND: They would go directly to the  
23 supervisor, and the way we have the program written we  
24 are starting that total process now, but they will go  
25 directly to that individual. INPO information right now

1 is coming to me and I immediately send it out to that  
2 individual. But we're going to channel it into that  
3 group directly.

4 (Slide.)

5 In terms of qualifications within my  
6 organization, I have 39 professionals on board now, with  
7 quite a variety of degrees. There are 51 degrees. I  
8 have Dr. Iyengar, who you will meet later. I have one  
9 additional Ph.D. we recently hired from Idaho with a  
10 Ph.D. in chemistry, which will add a lot of depth to our  
11 organization, primarily radiochemistry and fuels  
12 chemistry.

13 In terms of the degree spectrum, the  
14 engineering degrees are the ones that stand out, and I  
15 think we are getting a very diverse mixture of people  
16 through the recruiting effort.

17 (Slide.)

18 Experience within my group is represented on  
19 this slide. Professional experience is essentially the  
20 time from which an individual left college and entered  
21 the professional field, or in my case when I entered the  
22 military. And that's the staff number up there.

23 But there are some 445 years of professional  
24 experience; in terms of nuclear power plant experience,  
25 138 years. And I have three individuals within the

1 organization now -- Ray Berski, whom I mentioned  
2 earlier, from Duquesne, who's been at a commercial  
3 operating plant; I have a fellow in health physics who  
4 spent six years at Occonee; and a fellow in physics that  
5 spent time in operating plants and as a consultant, who  
6 was with Quadrex and has now come with us.

7 In terms of other nuclear experience, what I'm  
8 relating there is experience in design engineering, and  
9 this is primarily engineers that are coming out of --  
10 one I will pick for example is a Westinghouse mechanical  
11 designer, went to Hanford, worked for Rockwell out  
12 there, and we brought him in from there to get design  
13 experience under our organization.

14 (Slide.)

15 The next area I'd like to cover is the safety  
16 review program for Waterford 3 for the nuclear  
17 operations department. We call it an overall program  
18 because we consider it has four major elements: the  
19 safety review committee, the plant operating review  
20 committee, the onsite safety review group, and of course  
21 the quality assurance functions.

22 The safety review committee reports to Mr.  
23 McLendon. He has established the policy for that  
24 committee, and Mr. Maurin is the chairman of the  
25 committee, and we have been meeting roughly six months

1 now.

2 Mr. Wyatt pointed out there are eight managers  
3 from within Louisiana Power & Light. Dr. Clark Gibbs I  
4 believe you met at our last ACBS meeting, and he's on  
5 our committee now. Dr. Hendrie, Bill Lowe and Bob  
6 Douglas. They have added a significant degree of  
7 expertise to our committee.

8 And in terms of the membership, one concern  
9 last time was that we didn't have training involved in  
10 the committee. Dr. Sabri is a full-time member of the  
11 committee. The other committee members are myself, Roy  
12 Prados, the onsite safety review engineering quality  
13 assurance manager, and Dr. Iyengar.

14 MR. WARD: Who acts as chairman of that  
15 committee?

16 MR. DRUMMOND: Mr. Maurin.

17 The plant operations review committee reports  
18 to Dave Lester and is made up of members of the plant  
19 staff. The plant operations review committee -- PORC  
20 for short -- has been functional since February of  
21 1980. Primarily now they are reviewing procedures that  
22 are being developed at the plant. They are also  
23 starting to look into other events that might occur  
24 during the startup process.

25 Quality assurance is another element of the

1 program. Tom Gerrets has a presentation on quality  
2 assurance a little bit later.

3 Onsite safety review is the group which is  
4 under me, which is split into two sections, independent  
5 safety engineering and operations assessment. For both  
6 groups, primarily the independent audit and review of  
7 plant operations activities will fall within the  
8 independent safety engineering section.

9 Operations assessment is the nucleus of a  
10 group that can coordinate the total response to the  
11 multitude of industry information that comes into the  
12 organization.

13 (Slide.)

14 The disciplines within that group are  
15 electrical, mechanical, I&C, nuclear and radiation  
16 protection.

17 MR. PEARSON: Question. You still don't have  
18 in either your PORC or your SORG anyone representing the  
19 personnel area or an industrial organizational  
20 psychologist or somebody from the medical area, is that  
21 correct?

22 MR. DRUMMOND: That's correct, not as active  
23 members on the committee, no. We have within the  
24 organization -- well, contracted to LP&L, an industrial  
25 psychologist that visits the plant site and spends time

1 at the plant site, as well as at the general office. A  
2 doctor from one of the local hospitals visits the plant  
3 site periodically. And Dave, you might mention that.

4 But they are involved with the overall nuclear  
5 operation, but they do not sit on the safety review  
6 committee. But I'm certain if we needed expertise from  
7 that area of that community we would obtain it.

8 MR. BENDER: Mr. Drummond --

9 MR. PEARSON: Can I just say, don't you think  
10 you need some expertise of that order on these  
11 committees?

12 MR. DRUMMOND: In our evaluation in developing  
13 the committees, and particularly bringing in our  
14 outsiders to assist us in developing the committees we  
15 evaluated, we didn't feel it was necessary to have such  
16 an individual as a full-time member on the committee.  
17 In terms of -- to the degree that industrial psychology  
18 relates to human factors, which it does very closely,  
19 Dr. Sabri carries a lot of that expertise with her and I  
20 think would share that with the committee, and I think  
21 that has strengthened us significantly in the committee  
22 area.

23 MR. BENDER: Mr. Drummond, in the safety  
24 review committee and in the plant operations review  
25 committee -- and I guess there's an onsite safety review

1 subgroup?

2 MR. DRUMMOND: Yes, sir.

3 MR. BENDER: How does the structure of those  
4 committees compare with what's recommended by INPO or,  
5 if not INPO, how does it compare with sister  
6 organizations that you've talked about, Calvert Cliffs,  
7 for example, or Arkansas?

8 MR. DRUMMOND: Arkansas is the one I'm most  
9 familiar with because I spent most of my time there. On  
10 the safety review committee, I think ours is of a much  
11 higher caliber because of the outside expertise we have  
12 on the committee. It's primarily made up of management  
13 within the Arkansas Power & Light Company.

14 Our philosophy for the SRC is not the  
15 philosophy that's established in the standard technical  
16 specifications. The philosophy is to be an overview  
17 committee of the whole Waterford operation and to  
18 identify and mitigate potential risks that could  
19 develop. And Dr. Hendrie and Bill Lowe and Bob Douglas  
20 have been instrumental in the formulation of our plans  
21 in that area, and I think it's going to be extremely  
22 strong compared to some other organizations that I have  
23 visited.

24 MR. BENDER: How about the other two review  
25 groups?

1                   MR. DRUMMOND: I think the plant operations  
2 review group is very similar to the Arkansas structure.  
3 The primary difference is the fact that people who have  
4 sat on our committee don't have the years of operating  
5 experience behind them that the Arkansas people do,  
6 although we now have some people on Dave's staff, which  
7 he will address, that do have operating experience. The  
8 operating experience is not there, that's the primary  
9 difference.

10                  In terms of the onsite safety review group,  
11 that was formulated initially in my first structure of  
12 the organization following the guidelines that came out  
13 for requirements for the ISEG group, I expanded it to  
14 include operational assessment because I felt, and Mr.  
15 Maurin and management felt once I submitted my charts,  
16 that that was a function that needed to be channeled and  
17 focused in one area within the organization, so the  
18 information came in properly, went out properly, came  
19 back evaluated, and then was fed into the organization.

20                  MR. BENDER: Thank you.

21                  MR. DRUMMOND: That's all I have. Are there  
22 any more questions?

23                  MR. WARD: Anything else?

24                  (No response.)

25                  MR. WARD: All right. Thank you, Mr. Drummond.

1 MS. SABRI: My name is Zena Sabri. I joined  
2 Louisiana Power and Light December 28 of last year.

3 (Slide)

4 This is where I fit in the organization. I  
5 was hired there as the director of nuclear training.

6 (Slide)

7 What I would like to discuss today is the  
8 following: First, how do we approach training and our  
9 training philosophy, because our training philosophy and  
10 training objectives are going to very, very much affect  
11 the way we conduct training.

12 The other items I would like to discuss is how  
13 did we shift the organization to be able to achieve the  
14 training goals that Louisiana Power and Light have. And  
15 then I will be touching base with you on the status of  
16 the training programs that are ongoing with Louisiana  
17 Power and Light and the staffing and facilities for  
18 training.

19 (Slide)

20 The first item is one of the key reasons why I  
21 was delighted to accept the challenge of being the  
22 training director in Louisiana Power and Light is the  
23 real management commitment to training. That was  
24 something that I did discuss very, very closely before I  
25 accepted that job with upper management.

1           There is quite a bit of management commitment  
2 to training. It is not that we feel it is only a way to  
3 satisfy the regulation, but it is our first assurance  
4 for the big investment that we have put in this plant.  
5 It is insurance that we will be able to run the plant  
6 safely and efficiently and get our reliability and  
7 safety in the plant operation.

8           So the commitment is there, both in terms of  
9 providing the resources that are needed, manpower  
10 resources and financial resources. This commitment, I  
11 am quite convinced of since I joined the organization,  
12 this conviction has been made even stronger. I have  
13 been there for two months, and I do feel that the  
14 management commitment to having a top-notch training  
15 program is there and will continue to be there.

16           How we approach training in terms of the key  
17 features that we want to keep in our program is that  
18 usually after a BS graduate from engineering leaves  
19 school, there are certain key elements that stay in  
20 their minds.

21           We would like to have those key things that  
22 are distilled in the brains of the people included in  
23 the training program and then add to it something which  
24 typical engineering schools do not provide, which is  
25 plant-specific knowledge, implemented with

1 plant-specific Waterford knowledge.

2               We would like, and we are -- and I will  
3 discuss that in the organizational structure -- to  
4 develop a mechanism for the timely updating of programs  
5 to reflect the lessons learned from the industry, for  
6 example, or what we can find from the operation  
7 experience to analyze LERs, not just read them but find  
8 out from them what it is that we need to learn and  
9 immediately timely implement what we learn here and here  
10 from the significant event information.

11              Work that is going on now at INPO, we want to  
12 take these and make sure that those are immediately  
13 translated into training material. We do not want to  
14 keep this gap open which we believe the industry has  
15 suffered from for a while: we learn it but we do not  
16 implement it.

17              We want to make sure that every Waterford  
18 modification is reflected in the training program such  
19 that we do not have a maintenance person using the wrong  
20 valve packaging because the work order he was carrying  
21 with him did not reflect that we had changed this kind  
22 of valve. Whatever modifications we have to be timely  
23 and immediately implemented in the training program.

24              As Dr. Carbon has mentioned, probabilistic risk  
25 assessments, failures-modes-and-effects analysis are

1 going on. We want to make sure that all the results  
2 that we find out -- and we have an ongoing program and  
3 all the guidance we get from regulatory guides and INPO,  
4 et cetera -- that we do implement that in a timely  
5 implementation, update the training program to reflect  
6 that immediately.

7                 Then also, the safety review committee that  
8 Mr. Drummond discussed, we want to keep a two-way  
9 street, two-way communications between them such that  
10 whatever recommendations they come up with is  
11 immediately implemented in the training program.

12                 The training organization for the training  
13 program would like to keep flexibility, and this was an  
14 area that Dr. Pearson mentioned earlier, is how do you  
15 change -- you have to keep flexibility in the training  
16 program such that you can accommodate for variation in  
17 the training.

18                 That is a way of life. That is the reality of  
19 the industry now that the number of manpower that is  
20 needed, the manpower level that is needed is -- the  
21 supply is less than the demand. So we have to  
22 accommodate that in the training program.

23                 And at every point we have to measure the  
24 effectiveness and provide modifications for the programs  
25 to make sure that the programs are effective.

1               One of the most effective ways of training an  
2 individual at any levels to make sure that he has a  
3 vivid picture of the consequences of his action. For  
4 example, you look into TMI, you look into Ginna, you  
5 look into the whole sequence of events that are, to a  
6 great extent, similar in nature.

7               If the operator really has a visual image of  
8 how this loop functions, if you push here it is going to  
9 pull here, if he has that image, then he is not going to  
10 be tied up with procedures. We want to make sure the  
11 procedures are right but that the person have a feel for  
12 how the system is supposed to function and the  
13 consequences of his action on the system function.

14              This is something which we feel is very  
15 important and that we have to provide quite a bit of  
16 hands-on experience. And I will be discussing that and  
17 how we are developing the training facilities and the  
18 training labs to provide hands-on experience for both  
19 non-licensed operator training and for licensed operator  
20 training and training everyone in having their own set  
21 of what-ifs. That is, they do not have to come only  
22 from INPO or NRC or other industrial experience; we want  
23 to have the individuals who are functioning to provide  
24 their own educated what-ifs. I think that is really the  
25 first line of defense that we can have.

1           I will be discussing simulator training. We  
2 have committed to having a simulator facility. And I  
3 will be happy to report as to the progress in the  
4 simulator facilities and the training center, the  
5 location and the characteristics. And we are trying to  
6 structure the program, and I will be happy to come in  
7 about that.

8           And the training organization, the way the  
9 organization is structured is such that we can provide  
10 career paths for an individual who wants to start with  
11 the company who has an indication and an ability to grow  
12 in the company rather than have to switch companies to  
13 go to another place, which I think is a problem to some  
14 extent in the industry. That is why we are having very  
15 great difficulty in finding SROs and ROs.

16           So we are very much aware of making sure that  
17 we do the right screening of individuals. But once we  
18 get the qualified individual, you have to give them room  
19 to grow and give the organization a climate that is  
20 stimulating for a person to want to be there, not only  
21 financially, but wanting to be there.

22           MR. WARD: Do you see that as primarily an  
23 issue for a professional role people or the wage role  
24 people or both?

25           MS. SABRI: For the professional role people,

1 for the present, I think, for the next five years it is  
2 going to be very important. But do you mean like for  
3 the maintenance and testing people, et cetera?

4 MR. WARD: Yes.

5 MS. SABRI: Yes, we would want to keep them if  
6 they can show that -- you want to keep their experience  
7 there. We are providing them with career paths there.  
8 We do not want to force an individual in terms of  
9 skill-based people and professional-based people, we do  
10 not want to make the organization such that you force a  
11 person to go beyond what he wants to go, but you want to  
12 make sure the organization such that if a person has the  
13 ability and wants to grow in the organization, they can  
14 grow as far as their ability can support.

15 So it is really for both. It is really very  
16 important to all operators. I think we are seeing quite  
17 a bit of an exodus in the industry of operators from  
18 operating plants to consulting firms because of that  
19 particular issue.

20 (Slide)

21 Okay. How we structure the organization to be  
22 able to meet the objective that we have for training  
23 programs. As Mr. Maurin mentioned in his presentation,  
24 the training slots in the training organization, there  
25 were some initial allocations or allocated slots for the

1 training organization, and they are waiting for the  
2 training director to come in and give the feedback as to  
3 the proper staffing level and the ultimate  
4 organization.

5 And I am really delighted that they did that,  
6 because this way, we will be able to put the  
7 organization in a way that can support the philosophy  
8 and objective of the training organization.

9 All of this, I cannot give exact staff  
10 numbers, as Mr. Drummond and Mr. Lester and Mr. Sleger  
11 will be providing. I cannot provide these numbers as to  
12 what it will be, but I know that whatever is needed in  
13 terms of staffing level and manpower requirements will  
14 be met. We have the corporate commitment to provide the  
15 proper staffing level for an effective and efficient  
16 organization.

17 Those are two authorized slots, and I believe  
18 the area that was a presentation to ACRS on the system  
19 operability assessment review program. And it is a  
20 program that looks into Waterford-specific plant  
21 information.

22 We do systems analysis on them, probabilistic  
23 risk assessment on them that is plant-specific, include  
24 in them human factors considerations, the  
25 failure-modes-and-effects analysis, and review the plant

1 operability and then take that and carry it not only  
2 from the design of the system but carry that all the way  
3 to what are the indications in the control room for  
4 operators:

5                   Are we providing safety-significant events  
6 that are, from a risk factor, important? Are we  
7 providing enough information to the operator in the  
8 control room to handle these events?

9                   So this is an ongoing program, and it was  
10 initiated by Louisiana Power and Light long before TMI,  
11 long before 0700, 0835, and the whole spectrum of  
12 NUREGs. So it was a program that was issued long before  
13 it was a regulatory requirement.

14                  So the products of this program and the  
15 ongoing program will be used to make sure that we  
16 reflect safe plant-specific -- the right what-ifs and  
17 training materials. The products and analysis -- not  
18 only to read LERs but to analyze LERs will be  
19 immediately factored in.

20                  And the reason why we have this organization  
21 as an independent organization from this -- they both  
22 report to the training director -- is that you want to  
23 have an individual or group of individuals responsible  
24 for taking the product of this and translating it into  
25 training material. You do not want to have anything

1 fall in the cracks.

2                You want to have a two-way communication  
3 between the training organization and the safety review  
4 committee where any material that we generate in the  
5 safety review committee is translated into training  
6 material -- and there is an individual held responsible  
7 for doing that job, to make sure that all licensing and  
8 INPO guidance that we get are translated again into  
9 training information.

10              These are the ongoing training programs that  
11 cover both licensed and unlicensed operator training,  
12 and those are all ongoing programs. And the fact that  
13 we have just come up with the organizational chart does  
14 not mean that we do not have an active program in all of  
15 these. I would be very happy to discuss the status of  
16 these ongoing programs.

17              As for the procurement for training  
18 facilities, we are assessing what are the resources  
19 within the Midsouth system and assessing our needs to  
20 generate what we will be needing in Louisiana Power and  
21 Light for hands-on experience and training in these  
22 areas and for procuring a simulator.

23              And one of the key things we have for that  
24 simulator is to make sure that it does have the ability  
25 to simulate events that are frequent and that are of

1 safety relevance.

2               There is a study that was carried on by the  
3 NRC that showed that most simulators that do exist now  
4 are not necessarily simulating events that are frequent  
5 and have some safety relevance. So we are aware of  
6 that, and this is one of the things that we are putting  
7 as a requirement for that particular simulator.

8               MR. BENDER: Excuse me, Dr. Sabri. A couple  
9 of months is not long to get acquainted in this training  
10 business, and I am sure we need to allow you some time  
11 for development. But could you give us some insight  
12 into how you view the use of in-house personnel as  
13 opposed to hiring contractors to do the training for  
14 you?

15               MS. SABRI: At the present stage, we do have  
16 quite a bit of contractors who are helping. We have  
17 General Physics doing the STA training. Their program  
18 is well reviewed by INPO and NRC, and it gets high marks  
19 there.

20               So at this stage, we are using contractors.  
21 But as we staff here, we have to take up the LP&L people  
22 with those contractors who have experience to make sure  
23 that once the contractor -- whom we cannot rely upon  
24 indefinitely, it has to be for a specified period for a  
25 specified job -- once the contractor with the experience

1 is gone, that we do not lose the experience. With each  
2 contractor, you want to have an LP&L person teamed up  
3 with that individual, too.

4 MR. BENDER: Are we talking about training  
5 contractors or building contractors or operating  
6 contractors?

7 MS. SABRI: No. Training contractors.

8 MR. BENDER: Which training contractors do you  
9 have on board now? Are you going to tell us?

10 MS. SABRI: Yes, sir, I will be happy to.

11 MR. WARD: Well, I will wait with my  
12 question.

13 (Slide)

14 MS. SABRI: These are ongoing training  
15 programs. Those are the contract personnel that we  
16 have, and these are the LP&L people that we have. Some  
17 of these are not necessarily part of the training  
18 organization now. Only three of them are part of the  
19 training organization, but they are like training  
20 coordinators from the plant operation; that is, their  
21 full responsibility, their full-time job, is to  
22 coordinate with the training department with training in  
23 these functions.

24 You see here for our operations we have  
25 Quadrex, we have General Physics, we have NUS, we have

1 Combustion Engineering, in those training  
2 organizations.

3 MR. BENDER: As I understand it, you plan at  
4 some stage in the operations to discontinue those  
5 training contractors?

6 MS. SABRI: Yes.

7 MR. BENDER: And to pick up that capability  
8 within the Waterford organization itself?

9 MS. SABRI: Yes.

10 MR. BENDER: Are you using Memphis State?

11 MS. SABRI: We are using them for the attitude  
12 tests and screening of all operators before we put them  
13 into the licensed operator or even unlicensed, like for  
14 the cold-licensed program. It is a big investment, and  
15 we want to make sure that the individuals who are put in  
16 there have the potential of succeeding. So we are using  
17 Memphis State in the screening.

18 MR. BENDER: Have you given any thought to  
19 having some continuing relationship with some of these  
20 training organizations so that they come in on a  
21 periodic basis to just update?

22 MS. SABRI: Yes, sir. For example, we do have  
23 Combustion Engineering develop the NSSS plant-specific  
24 system description. And part of their responsibility is  
25 to make sure that whatever modifications that come in

1 which Combustion Engineering is going to be involved in  
2 are fed back into that training material.

3                 Once you have developed the balance-of-plant  
4 system description, which is contracted to Quadrex,  
5 usually you build from there. The building blocks, that  
6 is the first initial set that you use.

7                 The training organization later on should be  
8 responsible for updating that, because plant  
9 modification keeps on going. So we can do that, but we  
10 use contractors when we need to.

11                 MR. BENDER: Thank you.

12                 MS. SABRI: Mr. Ward, did you have a  
13 question?

14                 MR. WARD: Maybe I could let you finish this  
15 chart.

16                 MS. SABRI: This is the ongoing training  
17 programs, whereby we have LP&L and contract people. So  
18 we do have a sizeable number of individuals involved in  
19 contracting these training programs.

20                 This ends my formal presentation.

21                 MR. WARD: I have two questions. First, your  
22 simulator program. I understand, as I recall, you are  
23 using simulators at other sites or had used one other  
24 simulator.

25                 MS. SABRI: Correct.

1                   MR. WARD: But you are planning to have a  
2 specific Waterford simulator?

3                   MS. SABRI: Yes.

4                   MR. WARD: What is the schedule for that?

5                   MS. SABRI: The schedule for that is 1985. We  
6 are now in the proces of finalizing the request for  
7 bids. And the request for bids, we are including in it  
8 what we see needs to be included in the simulator to  
9 really be an advanced simulator. And so far now we have  
10 been using Combustion Engineering, and we have been  
11 using the TVA simulator to provide the STA training and  
12 operator training.

13                  MR. WARD: A more general question. I  
14 recently read kind of an interesting article. I am  
15 sorry I cannot quote the author or the journal. But it  
16 was talking about the human factors issue.

17                  And the burden of the article was essentially  
18 that the industry is off on the wrong track in the whole  
19 human factor issue, that biology and procedures and some  
20 of the other things that are being pursued are not  
21 really as important as a major issue which I think the  
22 author describes as sort of the inability of management  
23 to blend the operator mechanics or the hands at a plant  
24 and the engineers' minds. These are the author's  
25 words.

1           And that is really a problem that these two  
2 groups are kind of disconnected and do not work  
3 effectively together. I do not know whether there is  
4 anything to that or not. But do you see that as an  
5 issue? And if you do, does your training program or any  
6 other program, is it directed towards doing something  
7 about that?

8           MS. SABRI: I do see that as an issue, but I  
9 do not think it is really peculiar to the nuclear  
10 industry. Okay?

11           (Slide)

12           MR. WARD: True, but the nuclear industry may  
13 have some unusual risks which makes that more  
14 important.

15           MS. SABRI: For example, if you are going to  
16 be developing system descriptions from the point of view  
17 of flow diagrams and so on, this might be relevant to an  
18 instrumentation and control mechanic, or maybe relevant  
19 to an engineer.

20           For the operator, he does not want to see the  
21 detail where the valve is, he wants to see how are we  
22 indicating the system responses and the system functions  
23 in the control room.

24           So the way you present -- the way you train  
25 them or present the information to them is from their

1 point of view as to where the man/machine interface is  
2 going to be.

3                 For example, this part of the program, we do  
4 not translate the probabilistic risk assessment part as  
5 a training material to the operator other than if you  
6 have this kind of event sequence, you know these are the  
7 consequences. We do not have to go into too much of the  
8 system specifics to the engineer when we take the  
9 results of this. And we are doing that for the  
10 engineering training.

11                 What we want him to see are the systems  
12 redundancies now adequate, and have him also aware of  
13 what he was looking at on the flow diagram is how his  
14 system can fail because of an operator action.

15                 So in terms of the training material, we have  
16 to have different flavors depending on how the  
17 man/machine interface in that particular operation is,  
18 the nature of it. It is different between the engineer  
19 and, say, the designer of the plant, between the  
20 operator of the plant, between the maintenance and  
21 testing crew of the plant. And you have to shape the  
22 training material to accommodate the specific nature of  
23 the man/machine interface for that area.

24                 Now, for the record, I have been involved in  
25 the human factors area since 1973. We have gone through

1 analyzing a sizeable amount of all U.S. licensee event  
2 reports, not only from the human factors, but we had  
3 industrial psychologists, nuclear engineers, operators,  
4 statisticians. The statisticians were keeping us  
5 honest, not to lie with statistics.

6                 But when we started this program, Mr. Ward, we  
7 had a very different perception than when we finished  
8 the program. When we finished the program -- it is true  
9 that nuclear power plants are not following, per se,  
10 established guidelines for human factors as established  
11 by military criteria and aviation industry criteria.

12                 But being able to have a causal relation --  
13 that is, these control room designs, because they are  
14 not designed well there because of operator errors and  
15 events -- we cannot make that -- as a matter of fact,  
16 you see the opposite, that this correlation does not  
17 exist. It is in other areas that we are not emphasizing  
18 now that you find the event was initiated and it is an  
19 event where we do not necessarily have licensing  
20 requirements.

21                 This is where the objective of the program --  
22 it is not when we are evaluating this, we are not  
23 evaluating it only because there is guidance in terms of  
24 regulatory guides -- maintenance and testing crew, we do  
25 not have that much requirement for -- but this is where

1 most of the things that are of significance were  
2 initiated.

3 MR. WARD: I do not want to get too far afield  
4 in this, but just another 30 seconds. This particular  
5 article, I think, was at the point where the man/machine  
6 interface is not really the problem, but rather the  
7 sociological interface between the engineers and the  
8 operators was the problem, that during plant operation  
9 and emergency situations and so forth, there might be  
10 such poor communication and poor ability to work  
11 together that that sort of thing presents more of a  
12 potential risk than the more traditional areas of  
13 man/machine interface.

14 This is coming to you from left field. I just  
15 wanted to see if you had any particular point of view on  
16 that.

17 MS. SABRI: I think this is, to a great  
18 extent, a function of the management climate. So I do  
19 not believe, in this particular case, it is going to be  
20 any particular problem. I believe we may have caused  
21 this problem when we saw some of the writing on the  
22 wall, of asking that every operator has to have an  
23 engineering degree.

24 I have reviewed quite a few engineering  
25 graduates, and I have seen some operators who are much,

1 much more capable than many master's graduates I have  
2 seen. I mean in terms of the level of knowledge and the  
3 level of experience.

4 So the degree, per se, when we start asking  
5 about degree as a criterion or as the only criterion, we  
6 are probably creating a situation here whereby nature,  
7 when the STA is in the room and he does not necessarily  
8 have that much experience and the operator who really  
9 knows the ins and outs of this plant and he has to -- I  
10 mean the problem -- it might be something that we did  
11 create.

12 MR. WARD: Thank you.

13 Mr. Binford had a question.

14 MR. BINFORD: I would like to ask one  
15 question. If I understand it correctly, fuel load is  
16 scheduled for less than a year?

17 MS. SABRI: Yes, sir.

18 MR. BINFORD: What is your target date for RO  
19 and SRO license examinations?

20 MS. SABRI: The date of completion of the  
21 training program is by the end of August.

22 MR. BINFORD: I gather from what you said that  
23 most of the initial training that your operating  
24 personnel will get prior to fuel loading will have been  
25 done by training contractors rather than by your

1 in-house organization; is that correct?

2 MS. SABRI: No. A training contractor, like  
3 for example for STA training, we do have General Physics  
4 carrying that. Simulator training is carried by  
5 Combustion Engineering in their simulator facilities.  
6 The instructions, per se, for some of the cold license,  
7 I can go through that specifically.

8 For example, this is the cold license, and  
9 this is the progress for the cold license class.  
10 Academic refresher was carried by a professor of  
11 electrical engineering who had had quite considerable  
12 power plant experience with Louisiana Power and Light.

13 MR. BINFORD: Yes. But is he a member of your  
14 organization?

15 MS. SABRI: No, sir, he is not.

16 MR. BINFORD: Well, I do not need the  
17 details. All I wanted to find out was whether or not  
18 the bulk of training at present is being done by  
19 essentially contractor personnel or whether it is being  
20 done in-house. And the impression I get is that you are  
21 really not in place yet and most of it is being done by  
22 contractor personnel at this time.

23 MS. SABRI: By contractors who are in-house.  
24 Those contractors like Quadrex or General Physics, we  
25 have hired for full-time.

1                   MR. BINFORD: Oh, I understand that physically  
2 they are located there. I just wanted to get that point  
3 clear in my mind. So that your function will probably  
4 develop later on as you get your organization going, and  
5 then you will take over the training operation as you  
6 work into it. But initially, most of the training is  
7 going to be done by people who are not members of your  
8 organization?

9                   MS. SABRI: This is true, sir. Quite a few of  
10 them, though, have touched base about staying with the  
11 organization.

12                  MR. BINFORD: Oh, sure, sure, that happens all  
13 the time.

14                  MR. MAURIN: Excuse me. You might mention  
15 that all of this is under your direction, and it is not  
16 a situation where we have contracted a certain part of  
17 training with an organization and they go off and do  
18 that, but under your guidance, under your cognizance.

19                  MS. SABRI: No. They report to me.

20                  MR. PEARSON: I have a few questions. In  
21 developing your training program, you are going to need  
22 some training aids. When people leave training, they  
23 are going to go to the job and they will need some job  
24 performance aids. Maybe people in the industry consider  
25 this to be a specialty in and of itself. They are

1 specialists in this. Do you have these people on board,  
2 or are you going to hire them? Have you identified  
3 them?

4 MS. SABRI: Okay. I can give, for example,  
5 the material that is being developed by most of these  
6 contractors, when they develop it they have on their  
7 staff these training aid specialists such that the  
8 material is presented right. When we get into -- and I  
9 think it is a very, very valid point, Mr. Pearson --

10 (Slide)

11 -- and I think other organizations do not  
12 necessarily implement that as much as we plan to  
13 implement. For example, when we were doing any of this  
14 training, if there is a certain mechanic who is going to  
15 be working on a particular valve, in the laboratory that  
16 we are building for the training of that mechanic, the  
17 actual valve is going to be installed in the lab with  
18 the equipment that he will be using for the testing of  
19 this valve.

20 So when we are doing the training there, it is  
21 plant-specific, instrument- and plant-specific  
22 components, together with the machines and the tools  
23 that the individual is going to be using during his  
24 job. And it is not a very generic kind of training.

25 MR. PEARSON: Let me move on to another

1 question. Do you plan to hire somebody that might be  
2 called a measurement and evaluation specialist?

3 MS. SABRI: Measurement and evaluation  
4 specialist?

5 MR. PEARSON: Somebody that knows something  
6 about educational measurement or training program  
7 evaluation or knows something about statistics. Let me  
8 give you an example. In the SER supplement, they talk  
9 about an annual written examination, and then you  
10 mention something about, I think it was, a score, if a  
11 person got a score of 70 or below 70 he would not pass.

12 MS. SABRI: I set that criteria, yes.

13 MR. PEARSON: But what does a score of 70  
14 mean? Is it arbitrary?

15 MS. SABRI: No, it is not arbitrary. You see,  
16 I have been a professor, I mean in terms of training, in  
17 terms of -- I have been in the education area most of my  
18 professional life, so that I can appreciate exactly what  
19 --

20 MR. PEARSON: Well, what I am saying is that  
21 ultimately need to validate your test. Anybody can make  
22 up a test. Professors make them up all the time. That  
23 does not mean they are valid tests.

24 MS. SABRI: That is correct. And the only one  
25 who can really see whether the test is made right is a

1 person who has the knowledge of what is the subject and  
2 what the subject is addressing. You can have a  
3 professional person --

4 MR. PEARSON: Let me interrupt you there. I  
5 am not sure I agree with that. I think what you are  
6 talking about is face validity. But beyond that, there  
7 is the question of the validity of the test to relate  
8 the real-world performance.

9 MS. SABRI: Yes, yes.

10 MR. PEARSON: And it takes special statistical  
11 techniques to relate your predicted measures to your  
12 criterion measures. And I would hope that you would  
13 have somebody who could assist you in that area. That  
14 is one of the problems with just giving tests and using  
15 arbitrary curves and saying this person passed and this  
16 person failed.

17 For example, such a specialist would address  
18 questions of validity, item difficulty, what is called  
19 an internal-consistency item analysis. I do not see  
20 anything like that mentioned in the SER supplement.

21 MS. SABRI: You see those people as people who  
22 have a knowledge in the subject or as people who would  
23 give us the ground rules which can be extracted from  
24 valid industrial engineering or human factor textbook  
25 material? I see us using this material rather where

1 there are established guidelines in it. But then how  
2 would you measure the effectiveness of a test? It has  
3 to be somebody who has a knowledge in the subject, you  
4 know, to be able to see whether that test is really  
5 testing the topics that you should be testing.

6 MR. PEARSON: Another example is the use of  
7 simulators and the transfer of training, which I think  
8 we discussed at our last meeting. Again, that can  
9 require some statistical sophistication to demonstrate.

10 MS. SABRI: There is an ongoing program by  
11 EPRI since 1973 in performance measurement system. We  
12 do not see any LP&L -- we see the products from the EPRI  
13 research project, we can use those and implement them,  
14 implement what is relevant from them into our program.

15 But there is an ongoing effort in the  
16 industry.

17 MR. PEARSON: I am aware of that. One final  
18 quickie. Your report mentions behavior science training  
19 at one point. What is that?

20 MS. SABRI: This is like management and -- let  
21 me get exactly the details of that. Management skills,  
22 stress management. We will get you the details of this  
23 program.

24 What we are using there is a tape that is used  
25 for manager training in this area, and we are adapting

1 that.

2 MR. WARD: Okay. Thank you very much. I  
3 think we had better move on to our next speaker,  
4 please.

5 MR. MAURIN: Tom Gerrets, who is our QA  
6 manager, is not feeling too well today. But he has  
7 managed to make it in, so we wondered if we could put  
8 him in out of sequence?

9 MR. WARD: Sure. Good luck, Mr. Gerrets.

10 MR. GERRETS: My name is Tom Gerrets, and I am  
11 quality assurance manager for LP&L.

12 (Slide)

13 And during my part of the presentation I am  
14 going to cover our quality assurance organization,  
15 including how we are set up and the duties of our  
16 organization, who we interface with, what our current  
17 level of staffing is like, and what our experience level  
18 is at the present time.

19 (Slide)

20 I know you saw this chart earlier, but this is  
21 my organization. And I report to Mr. McLendon as senior  
22 vice president of operations. This change was made in  
23 December, and enables me to report to a higher level in  
24 the organization and gives me the required degree of  
25 independence I need in overseeing both the fossil and

1 nuclear QA programs for which I have responsibility.

2 (Slide)

3 Our QA organization is broken down into four  
4 subgroups: the first group is nuclear operations, which  
5 is on site; construction, which is also on site at  
6 Waterford 3; the general office group, which is  
7 downtown; and the fossil group, which is handling the  
8 construction QA for our coal units and also our present  
9 operating plants.

10 Physically, both our nuclear operations group  
11 and our construction group have -- their main  
12 responsibilities are in the areas of audit and  
13 surveillance, with required support functions that are  
14 required by the regulations, such as 10 CFR 50.55.E and  
15 so forth.

16 But these are the main activities that we do  
17 perform in each of the areas that are shown.

18 (Slide)

19 Now, on a daily basis we interface with  
20 several organizations. Middle South Services is our  
21 fuels quality assurance, and we maintain close contact  
22 with that organization. We also have a close  
23 relationship with our purchasing department, especially  
24 with regard to our vendor evaluation program.

25 And within those four managers that report to

1 Mr. Maurin, we have daily interface with the  
2 administrative services group, training plant  
3 operations, and project support.

4 (Slide)

5 The breakdown of our current organization  
6 includes 21 authorized personnel. 20 of those are  
7 professionals. Currently, we have 15 on board. We have  
8 offers accepted by two individuals. And I also have one  
9 consultant. So overall, I have 18 of 20 of the  
10 authorized professionals on hand at the current time.

11 The individual filling this position, which is  
12 quite active at this time, Bill Morgan, has 25 years'  
13 experience in nuclear power, 17 of those being in the  
14 nuclear navy, and 8 of those in commercial and nuclear  
15 both in construction and quality assurance.

16 (Slide)

17 This is a breakdown of all the personnel that  
18 we currently have, plus one that will be coming on  
19 board. And we feel that we have a very high level of  
20 experience, total nuclear experience, of 150 man-years,  
21 total industrial experience related to industry, such as  
22 the nuclear power industry, of 346, and 138 years of  
23 QA/QC experience.

24 Half of our people have degrees, and many have  
25 various certifications, such as the qualified engineer

1 and a PE in engineering and various disciplines, and  
2 also PE in quality engineering area.

3 (Slide)

4 So, in summary, we feel like we have a very  
5 good and functional organization structure with the  
6 required independence and authority that we need to  
7 function correctly. We also feel like we have a very  
8 good working relationship with the nuclear operations  
9 group and other LP&L departments. And also, our  
10 experience level we feel is very high for an  
11 organization of our type.

12 MR. BENDER: Mr. Gerrets, had you used the  
13 N-45 standards in your quality assurance operation?

14 MR. GERRETS: The N-45 and all the daughter  
15 standards are part of our program. You go right on down  
16 the line, 45, 22, 5, 6, 9, so forth. Most of them are  
17 endorsed by reg guides, and these are listed in the  
18 FSAR.

19 MR. BENDER: Are your people active on those  
20 standards development committees?

21 MR. GERRETS: The previous quality assurance  
22 manager, Mr. Burt Anderson, was part of the committee  
23 developing standards.

24 MR. BENDER: Are your people trained in the  
25 use of those standards?

1                   MR. GERRETS: Yes. That is part of our  
2 training program.

3                   MR. BENDER: In making the transition from  
4 what amounts to a construction QA operation to an  
5 operations QA, what kinds of things do you envision  
6 might be different?

7                   MR. GERRETS: Well, certainly, just the  
8 operational aspect of it is different. The radiation  
9 control aspect of it is different. Those other two,  
10 health physics and operations, that are the most obvious  
11 to us.

12                  MR. BENDER: How do you envision you will use  
13 trend analysis?

14                  MR. GERRETS: Well, we plan to trend all our  
15 various audit reports from all the different  
16 organizations, our own and outside organizations, and  
17 also what we call a CIWA, which is a condition  
18 identification and work authorization. It is a document  
19 that can be used to identify a problem. All those will  
20 be trended to identify plant problems, both machinery  
21 and personnel-type problems.

22                  MR. BENDER: Thank you.

23                  Any other questions for Mr. Gerrets?

24                  (No response)

25                  Thank you very much.

1                   MR. SLEGER: Good afternoon. My name is Joe  
2 Sieger, and I occupy the position of administrative  
3 services manager.

4                   (Slide)

5                   While this chart is on, I would like to make  
6 two points inasmuch as they will have a bearing on other  
7 follow-up comments during the remainder of my  
8 presentation. And that is the fact that nuclear  
9 administrative services has been established on a  
10 co-equal status with that of plant operations, nuclear  
11 project support, and nuclear training. In addition to  
12 that, I report directly to Mr. Maurin, the vice  
13 president of nuclear operations.

14                  Those two points will have a bearing on other  
15 factors during the course of the presentation.

16                  (Slide)

17                  I will be addressing during the presentation  
18 the organization of nuclear administrative services, the  
19 location of it, and you saw where it is positioned in  
20 the nuclear operations activities and its physical  
21 location, the comparison to the previous organization  
22 that we have in relation to administrative services, how  
23 we are currently staffed, our position on staffing, and  
24 then through addressing of these activities, give  
25 recognition to the support role of administrative

1 services.

2 (Slide)

3 We can view administrative services as two  
4 major components; that is, on-site and off-site  
5 activities. On site we have the general support  
6 organization, which consists of administrative services,  
7 which is further broken down into a clerical unit,  
8 central records, document control, and a material and  
9 support activity.

10 Also, we have the on-site security force and  
11 special services, which is designed for the purpose of  
12 general housekeeping of the total plant.

13 Off site, we have the off-site administrative  
14 services, which supports our nuclear project group, our  
15 cost control and contract administration, and not yet  
16 determined for sure whether it will be off site or on  
17 site, a planning and scheduling activity.

18 (Slide)

19 MR. WARD: Is the last item to be for shutdown  
20 planning in the future? Is that what we are looking at  
21 there?

22 MR. SLEGER: It will be a total planning and  
23 scheduling, as opposed to the planning and scheduling  
24 activity. It will address all aspects of the plant  
25 operation.

1           The next chart will show where we were  
2 previously positioned as far as some of our support  
3 activities were concerned. The general support agency  
4 reported directly into the assistant plant manager for  
5 plant services. And general support then was not a  
6 total effort such as administrative service is now.  
7 Some of it consisted of only security and basic  
8 administration materials and stores and document control  
9 or central records.

10           (Slide)

11           Graphically depicted then is the total  
12 administrative services organization, consisting of a  
13 headquarters staff of two, planning and scheduling,  
14 which I previously mentioned, then off site the  
15 administrative activity, general support, and cost  
16 control contract administration.

17           Underneath general support then remains the  
18 activities which were shown in the previous chart, that  
19 being security, administrative services, special  
20 services, and administrative services, consisting of  
21 those three agencies.

22           (Slide)

23           MR. BINFORD: Let me ask you one quick  
24 question. I do not see in this chart, and I do not know  
25 whether I missed it somewhere else, but anywhere in here

1 is there an organization that is responsible for  
2 emergency planning and emergency control.

3 MR. SLEGER: Emergency planning will be  
4 addressed by the plant manager.

5 MR. BINFORD: Okay. Thank you.

6 MR. WARD: You mean off-site emergencies?

7 MR. BINFORD: I mean planning for emergencies  
8 in controlling the situation should an emergency occur.

9 MR. WARD: Involving off-site? Did you  
10 understand the question?

11 MR. SLEGER: Yes, I understood it. We will be  
12 involved, but we are not responsible.

13 MR. BINFORD: Okay. Fine. I guess we will  
14 hear about that later.

15 MR. SLEGER: Yes. Numerically, we do have our  
16 staff positioned for the administrative services  
17 activity. We hope very shortly to fill the general  
18 support superintendent's position. We have all of our  
19 LP&L people for security. Our permanent personnel are  
20 headed up by these. These seven LP&L persons have a  
21 considerable amount of background in police and military  
22 police activities.

23 Our administrative services is in good  
24 position. We have our special services slots filled.  
25 Planning and scheduling, we are currently working on.

1 We have reviewed various resumes and have made contact  
2 with on-site personnel representatives to start  
3 interviewing for those positions.

4 Our off-site administration is in good  
5 position. And cost control contract administration is  
6 filled. The asterisk by security has reference to the  
7 fact that we will have a total of 89 contract personnel  
8 provided by the Wackenhut Corporation for meeting our  
9 security effort on site.

10 MR. BENDER: Mr. Sleger, to what degree do you  
11 plan on using computers to deal with planning and  
12 scheduling of the overall plant needs which were  
13 suggested?

14 MR. SLEGER: I have personally not addressed  
15 that at this point. However, we do have in the future a  
16 desire to look at that capability, yes.

17 MR. BENDER: Well, there are the requirements  
18 built into the technical specifications for things that  
19 have to be done on a regular basis, and record control  
20 and things of that sort that have to be scheduled. Is  
21 that part of your duty or would that be in the plant  
22 manager's sphere?

23 MR. SLEGER: I do not believe I can answer  
24 that question.

25 MR. LESTER: Mr. Bender, the things you are

1 speaking about are covered under the maintenance  
2 planning and history of computer capability, which we  
3 have on site. In addition to that, we would -- in fact,  
4 we have now -- a construction and startup schedule going  
5 into a project too. I do not know if you are familiar  
6 with it. It is a software package.

7 MR. BENDER: I will take your word for it that  
8 it exists.

9 MR. LESTER: It is in effect now.

10 MR. BENDER: One other question with regard to  
11 the plant operation. Are you taking responsibility for  
12 deciding -- that is the wrong word -- for determining  
13 how many of what kinds of craftsmen are needed at  
14 various times to perform the important tasks in a plant,  
15 or is that out of your sphere?

16 MR. SLEGER: No, sir, I would not view that as  
17 part of our responsibility, although we would  
18 coordinate closely with the plant planning and  
19 scheduling activity.

20 MR. BENDER: That is all right. Thank you.

21 MR. SLEGER: Lastly, through formation of the  
22 nuclear administrative services, we believe we have then  
23 achieved the administrative and support activities which  
24 are contained in the nuclear administration and have  
25 assigned them to a single manager.

1           This permits a more direct line in the  
2 accomplishment of the administrative requirements and  
3 actions, in that I no longer have to go to the assistant  
4 plant manager but report directly to Mr. Maurin and we  
5 have relieved, in fact, a considerable amount of  
6 administrative burdens from the plant staff.

7           MR. WARD: I would just like to comment that  
8 that really looks like very excellent. The  
9 organization, I think, is very excellent from that  
10 point. I think that third dot there is very important.  
11 I am not telling you anything you do not know. I am  
12 just agreeing with it.

13           MR. SLEGER: And in addition, of course, it  
14 permits me to make direct contact with my counterparts  
15 at corporate headquarters.

16           That concludes my presentation. Are there any  
17 questions? If not, I will be followed by Dave Lester.

18           MR. LESTER: Good afternoon. My name is David  
19 Lester, plant manager for Waterford 3. In the  
20 organization I report directly to Mr. Maurin, vice  
21 president of nuclear operations.

22           (Slide)

23           And I will be discussing these items shown on  
24 this slide during my presentation.

25           First, I will go through the organization and

1 give you a little bit of the idea of the experience of  
2 my staff, which I believe you will see quite an  
3 improvement in since the August meeting in both cases.

4 Finally, in your letter of August 11, you  
5 indicated that we should make great efforts in building  
6 an integrated staff of LP&L contract forces for the  
7 startup period and for the follow-on operations. I will  
8 discuss that as well.

9 (Slide)

10 And finally, the conduct of our operations.

11 The slide shows the organization of the plant operations  
12 staff as it existed at the time of our August 6th  
13 meeting, except for the fact that, as has been mentioned  
14 already, there has been quite a bit of restructuring.  
15 In fact, the training and administrative services have  
16 been removed from my direct responsibility.

17 I should point out that I agree with you, Mr.  
18 Ward, both of the structural changes I advocated, I  
19 thought that it required more of my time and attention  
20 to be devoted to plant operations, maintenance, and  
21 startup. But the recognition of the administrative  
22 burden relief and also the recognition of the magnitude  
23 of the training effort led to this type of  
24 restructuring.

25 In addition to that, I think we gained an

1 advantage in the area of control of management by  
2 removing these two large elements from the direct  
3 control of the plant staff. I will say that it is going  
4 to require additional coordination, and I am sure we  
5 will be pushing -- I will be pushing -- the training  
6 manager and the nuclear support manager and the  
7 administrative services manager to get the support that  
8 is needed to operate the plant. And I am sure I will  
9 get that support. So training and general support no  
10 longer report to me.

11 From a staffing point of view, I have on the  
12 staff Paul McGuire as technical adviser. Paul spent four  
13 years as plant manager of the Pilgrim station.  
14 Following that, he spent about a year and a half doing  
15 evaluation and assistance visits for INPO. In that  
16 respect, Paul has been a great asset to my staff. In  
17 fact, he has been an asset also to the nuclear  
18 operations department.

19 I should point out one particular value that  
20 Paul has presented to us, and it relates to the question  
21 asked by you, Mr. Ray, with respect to INPO criteria and  
22 so forth. I believe it was you who asked that  
23 question.

24 Lee Maurin mentioned our nuclear program  
25 manual. That manual uses INPO criteria as a basis. It

1 also takes into account regulatory guides, regulations,  
2 industry practices, and so forth. But as a basis, the  
3 INPO criteria are there, including feedback mechanisms  
4 so emphasized by INPO.

5 In addition, we will have an evaluation of the  
6 systems visit. I have next week a pre-visit discussion  
7 and the visit itself will occur in the month of April.

8 MR. RAY: Is Mr. McGuire a permanent  
9 employee?

10 MR. LESTER: He is a contract employee, on  
11 contract to me.

12 At our last meeting we discussed the fact that  
13 certain key staff positions were not filled. I should  
14 point out that now the operations and maintenance  
15 assistant plant manager is on board. He has several  
16 years of operating experience as operations and  
17 maintenance manager at an operating nuclear plant. So  
18 he comes to us with great experience in that respect.

19 In addition to that, the operations  
20 superintendent is also filled, and he also comes to us  
21 from an operating plant, having had about nine years of  
22 experience in a commercial plant with navy experience  
23 prior to that.

24 So I think I have improved the strength of  
25 experience of my staff in the operations line, which is

1 probably the most important, significantly since our  
2 last meeting.

3 MR. CARBON: The operations superintendent,  
4 what kind of specific experience did he have?

5 MR. LESTER: He was operations supervisor at  
6 an operating nuclear facility.

7 MR. CARBON: A shift supervisor?

8 MR. LESTER: Yes.

9 MR. CARBON: At a commercial plant?

10 MR. LESTER: Yes.

11 MR. CARBON: For how long a period of time?

12 MR. LESTER: For about nine years, not as a  
13 supervisor but as an operator. He went through the  
14 chain, starting out with the facility about nine years  
15 ago, qualified as an RO and then SRO. As an SRO, I am  
16 not really sure of the number of years, but it was  
17 several years as an SRO.

18 MR. CARBON: Was it a similar kind of plant?

19 MR. LESTER: It was a BWR.

20 MR. CARBON: How about the assistant plant  
21 manager?

22 MR. LESTER: BWR. Both of those fellow are  
23 now in our cold license program.

24 MR. CARBON: And the assistant plant manager  
25 was at that level at the BWR?

1                   MR. LESTER: That is correct.

2                   MR. CARBON: He was assistant plant manager?

3                   MR. LESTER: He had some experience as a  
4 manager of plant operations and maintenance. While he  
5 was in that position, the utility restructured, and he  
6 ended up as manager of operations. They split the two  
7 functions, and he got the operations.

8                   MR. CARBON: How long was he either manager of  
9 operations or --

10                  MR. LESTER: I believe about a year and a  
11 half, Mr. Carbon.

12                  MR. CARBON: Thank you.

13                  MR. LESTER: I believe that is correct. It is  
14 close.

15                  I mentioned that the assistant plant manager  
16 and the operations superintendent are both in the  
17 license program right now. Both of these gentlemen are  
18 also members of the plant operations review committee.

19                  The quality control engineer is also a member  
20 of the committee. And Lee Maurin presented him with a  
21 30-year company service pin about a week ago. He has  
22 been in the quality assurance and quality control chain  
23 from essentially the beginning of construction of  
24 Waterford. They got him from the quality assurance  
25 organization. And now he has quality control. He has

1 also spent some time at operating plants.

2 MR. BINFORD: What is the relationship of that  
3 position to the regular staff quality assurance  
4 organization?

5 MR. LESTER: Quality control, Mr. Binford, is  
6 strictly associated with the physical quality of the  
7 plant. They do review procedures, but they do not do  
8 audits. They do strictly quality control functions.

9 MR. BINFORD: Thank you.

10 MR. LESTER: I have a planning and scheduling  
11 group reporting to me, which is right now primarily  
12 interested in assuring that the startup schedule is  
13 planned well and is maintained. An assistant plant  
14 manager for plant services, Mr. Alleman, has spent quite  
15 a bit of time at operating plants a Millstone, at  
16 Arkansas Nuclear 1, and at St. Lucie. In fact, I would  
17 like to have him on the site, but he is gaining a  
18 tremendous amount of experience in that respect.

19 He also was in the SRO license program. He  
20 was former assistant plant manager at one of our fossil  
21 stations. He has been with the project since about  
22 1977.

23 Finally, the startup engineer supervisor spent  
24 in excess of a year in the startup of Arkansas Nuclear 1  
25 prior to taking the job at Waterford 3. He came back to

1 us with some excellent ideas with respect to startup.  
2 For example -- I will show you this in a later slide --  
3 we have assumed direct responsibility for  
4 construction-type testing on Waterford 3. We feel that  
5 is to our advantage. We want that to be done under our  
6 direct control rather than a constructor or  
7 architect-engineer's control.

8 Now, that adds quite a bit to the scope of our  
9 startup effort. In fact, it almost doubles it from the  
10 typical utility. But we think we are going to get a  
11 better product that way.

12 Ralph Kenning -- again, Mr. Ray, you were  
13 talking about health physics -- Ralph spent a couple of  
14 years at Arkansas Nuclear 1 in their health physics  
15 program. He is very well qualified. In fact, the  
16 Arkansas people would like to have had him on their  
17 staff. When they lost their health physics engineer  
18 about a year ago, they replaced this fellow with another  
19 man.

20 MR. RAY: When he was at ANO, was he sent  
21 there by your people? He was your employee?

22 MR. LESTER: For the most part, we sent him  
23 for other training. There were occasions where Arkansas  
24 was short during shutdown periods where they asked for  
25 him to come up and help. And we offered his services,

1 so he got the experience. But it was certainly to our  
2 advantage in both ways to get him that experience.

3 Now, the question was asked with respect to  
4 staffing whether the health physics department appeared  
5 to be low. And we mentioned that we have just received  
6 an authorization to increase that staff. And Ralph has  
7 people in training for health physics. He is the  
8 nucleus of this organization working. He has most of  
9 his plans developed.

10 We have conducted an internal audit of the  
11 health physics program through a contractor in the last  
12 couple of months, and right now there is an NRC audit of  
13 our health physics program going on at the site. And we  
14 feel pretty comfortable about it.

15 MR. RAY: You have about 50 percent of your  
16 projected staffing?

17 MR. LESTER: Yes.

18 MR. RAY: How do you feel about what you will  
19 have a year from now or time of fuel loading?

20 MR. LESTER: We have been relatively  
21 successful in getting these type of people. We have a  
22 separate chemistry department, as you will notice. So  
23 our radiation chemistry goes in this department. We are  
24 totally staffed there essentially, and I really do not  
25 feel uncomfortable about it.

1           I think we will be able to track these health  
2 physics technicians. Now, I am not saying that we will  
3 get to the full 27 for the department, but we will  
4 certainly get enough to where augmentation by contract  
5 forces will not be detrimental.

6           MR. RAY: Augmenting it that way is a  
7 practical possibility, you think?

8           MR. LESTER: Yes.

9           MR. RAY: Thank you.

10          MR. LESTER: We are talking primarily in the  
11 technician area.

12          MR. WARD: Maybe you are not going to leave  
13 this, but you do not have a chart showing the new  
14 organization or are you going to tell us exactly what is  
15 dropped off?

16          MR. LESTER: This is the new organization.  
17 Since we met with you we have added one other thing, and  
18 that is the radwaste department down here. There is no  
19 one in that department, because it is essentially a  
20 brand-new department.

21          However, I do have a contract engineer working  
22 heavily in the radwaste planning area. And I had had  
23 that already in health physics. It was taken out of  
24 health physics.

25          With respect to open slots, the primary

1 positions which are open now are the STA coordinator,  
2 the radwaste engineer, and the nuclear engineer and the  
3 plant engineer.

4 Now, we have well-qualified contract personnel  
5 in both of these areas and one working in the radwaste  
6 area. And we are, as Lee also mentioned, actively  
7 seeking filling those positions. But we feel that we  
8 have the work being done in those areas and will  
9 continue to do so until we are able to fill the  
10 positions or grow one of our own.

11 I might also mention that in the safety  
12 evaluation report the positions of maintenance assistant  
13 superintendents, which really are these three levels,  
14 were not filled. The only reason those are not filled  
15 is that we feel we can fill those positions from within  
16 the staff. We are just awaiting further developments of  
17 some other individuals before we do so. So I do not  
18 feel that is a tough position to fill.

19 MR. BENDER: Mr. Lester, do you anticipate  
20 filling those with people that are now on the Waterford  
21 staff?

22 MR. LESTER: Yes, they are probably on my  
23 staff.

24 MR. BENDER: So they are familiar with people  
25 who work in the plant.

1                   What is your assessment of the status of the  
2 program? We heard from your training manager, but I  
3 presume as plant manager, you have some views as to what  
4 actually has been done and what needs to be done.

5                   MR. LESTER: My assessment of that is:  
6 excellent. I think it will get the attention it needs.  
7 I know I had problems giving it attention.

8                   MR. BENDER: I think you are not addressing  
9 the question I asked.

10                  MR. LESTER: I am going to.

11                  MR. BENDER: Okay.

12                  MR. LESTER: We have had ongoing departmental  
13 training. I assume you are referring primarily to -- do  
14 you want to talk about licensed operators?

15                  MR. BENDER: I am not trying to address any  
16 part of it specifically. I would just like to know  
17 what you think needs to be done and how it stands right  
18 now.

19                  MR. LESTER: We need to get more people in  
20 classrooms.

21                  MR. BENDER: To learn what?

22                  MR. LESTER: The cold-license program, I do  
23 not feel very uncomfortable about. We have some 42  
24 candidates for SRO and RO licenses. Much of that  
25 program has been ongoing for several years. Many of

1 those candidates have been there for several years. I  
2 do not feel uncomfortable about the cold-license  
3 program. I think is planned and going well.

4 In the non-licensed area I think we need a  
5 little more centralization, although a lot of the  
6 training that has to be done has been done.

7 MR. BENDER: What is your present feeling  
8 about the status of the emergency procedure program and  
9 the development of knowledge of what is in place and  
10 what needs to be done?

11 MR. LESTER: We have been very active in the  
12 owners group, working on the emergency operating  
13 procedures. I think we were the first utility to really  
14 walk through procedures with the staff in the  
15 simulator. We did that at Palo Verde, and I attended  
16 that. And we also walked through those procedures in  
17 our own control room.

18 Since that time there has been a restructuring  
19 of the CE approach to emergency operating procedures. I  
20 believe they call it the symptom orientation, whereby CE  
21 is rewriting guidelines. We expect to have that input  
22 to us in April, after which we will again revisit our  
23 emergency operating procedures and probably go through  
24 the same cycle.

25 Our participation in the owners group has been

1 active. We have had representation at, I believe, every  
2 meeting of that owners group, working on the emergency  
3 operating procedures.

4 In addition to that, the group itself is  
5 taking a new direction. There is a meeting next week  
6 for the purpose of having the utility membership assume  
7 more of a leadership role in that work rather than the  
8 ones we were talking about. I have a meeting planned on  
9 the 22nd of this month to begin a CE owners group plant  
10 management organization. And I am sure that item will  
11 be discussed there.

12 MR. BENDER: One other point. In the training  
13 program do you anticipate or see a need to review with  
14 the operating staff the kinds of events that have  
15 occurred at Ginna, in Crystal River, in several places?  
16 In your view, is that needed in the training program?

17 MR. LESTER: Oh, yes.

18 MR. BENDER: Is it cranked in there now?

19 MR. LESTER: It certainly is cranked in from  
20 the point of view of TMI.

21 MR. BENDER: TMI is one accident. But if  
22 everybody learns about TMI, they will forget there are  
23 hundreds of accidents that have occurred. Many of them  
24 went in the right direction but could have gone the  
25 wrong direction.

1                   MR. LESTER: But one of the results of TMI,  
2 the training programs are taking a direction where even  
3 though they might look at a specific accident or  
4 accident sequence, they are looking more at the  
5 fundamentals -- heat sinks, heat sources, inadequate  
6 core cooling is a big thing that could result from many,  
7 many sequences. So I think they are taking a better  
8 approach so that individual sequences are less  
9 important.

10                  Is it cranked in right now? I would have to  
11 say yes, but I am not sure how formally.

12                  MR. BENDER: I suggest you get together with  
13 your training manager and find out how it might be  
14 cranked in better if you are not sure about it.

15                  MR. LESTER: We plan on doing that through our  
16 operational assessment program, as was mentioned here  
17 previously by Fred Drummond, through ISEG and the  
18 on-site safety review group.

19                  MR. RAY: In training your operators for the  
20 RO and SRO examinations, have you put them through any  
21 exams that you might have administered just to see how  
22 they might be shaping up, or are they not at that point  
23 yet?

24                  MR. LESTER: We plan that in the training  
25 cycle.

1                   MR. RAY: You have not reached those yet?

2                   MR. LESTER: Not in as formal a manner as we  
3 will in the later stages.

4                   MS. SABRI: If I can address those two points  
5 there. In terms of including the operations experience  
6 in the program, the material as it is developed up to  
7 now, we still cover that. It is usually a transient  
8 analysis on the simulator in Combustion Engineering, but  
9 not necessarily -- the final material does not include  
10 that.

11                  As we finish the system description that we  
12 have contracted to two organizations, we are asking that  
13 a specific check be added whereby, as you say, go into  
14 chemical and control systems. We are going back to  
15 analyze the event. And we are contracting with a  
16 contractor to do that. We have analyzed the event for  
17 all events that relate to that system and the  
18 consequence, and we are putting that into the training  
19 material.

20                  Then in the exam itself we are using -- for  
21 example, we give them a analysis of that report and we  
22 ask them to look at this event and follow its relevance  
23 in a system that can be affected according to it in  
24 Waterford 3.

25                  So it is not yet -- we are going to make that

1 available. As to the exams, sir, we will be having an  
2 exam to assist the training programs and how much we  
3 have to change. And at every interval there will be  
4 formal exams.

5 We want to assess the effectiveness of the  
6 training as we go along so that we have enough time to  
7 correct whatever needs to be corrected. We do not want  
8 to leave it until the end.

9 MR. LESTER: Including full simulator license  
10 operator exam.

11 MR. WARD: Okay, we had better move along.

12 MR. LESTER: I wanted to mention here in  
13 operations that we do reiterate that we do have an  
14 experienced SRO or RO for every one of the six shifts,  
15 plus the previously qualified STA as an operating  
16 supervisor.

17 (Slide)

18 Well, let me mention one other thing. There  
19 was a question asked with respect to emergency  
20 planning. The emergency planning coordinator is in the  
21 plant engineering department. As a normal process,  
22 however, during this initial development of emergency  
23 planning and the heavy work load, he is now reporting  
24 temporarily to Sam Alleman on site, although, in  
25 addition to that, he works very closely with a fellow

1 whom Fred Drummond has assigned to work the off-site  
2 emergency plan effort.

3 There was also a question with respect to tech  
4 specs and where they are controlled and coordinated.

5 There are tech specs surveillances and tech spec reviews  
6 done throughout the plant, depending upon the area of  
7 expertise required for that particular spec.

8 This slide depicts the experience of my  
9 staff. Again, total nuclear includes military,  
10 construction, operation, total commercial nuclear. It  
11 takes out the military essentially, but includes such  
12 things as construction and time at Waterford 3. And  
13 pure operational nuclear experience is shown in this  
14 column.

15 We currently have 204 of 256 positions filled,  
16 which is greater than 80 percent. But, you know, it is  
17 kind of hard to really shoot for a goal there because  
18 the staffs continue to grow. We have had additional  
19 authorizations on the staff and just recently -- you  
20 know, it is not indicative of our recruiting results.

21 What is indicative of our recruiting results is the fact  
22 that we had a total staff of 312 in August, and we now  
23 have more than that on board. So I think we have had  
24 much success in that respect.

25 And, of course, the contract personnel on the

1 staff are the 500, in excess of 500, contract personnel  
2 working on developmental things in startup.

3 (Slide)

4           The committee indicated that we should build  
5 an integrated organization for startup and operations.  
6 The next few slides I am going to show you how we have  
7 done that and how we plan to do it in the future.

8           First of all, I mentioned that we have assumed  
9 the direct responsibility for construction testing,  
10 which I also said probably doubles our responsibility.  
11 This slide depicts the preoperational and prerequisite  
12 test organization. And this organization was in effect  
13 prior to the first ACRS meeting, and we felt we really  
14 did have an integrated organization at that time.

15           And the solid lines, the solid lines represent  
16 the plant organization structure as it will exist after  
17 operation, as is shown in my official company  
18 organization charts. The dotted lines show those  
19 positions which we recognize as being needed for startup  
20 and during this peak period, but which will disappear  
21 after the unit has been successfully tested.

22           Prerequisite and preoperational tests have to  
23 do with system components and systems themselves. And  
24 the biggest integration required there is with the  
25 maintenance department, checking out valves, pumps, et

1 certera. So that the testing that is done includes this  
2 interface with maintenance.

3 My startup manager is an LP&L person. All the  
4 people in the solid lines are LP&L people except for the  
5 peak load of craft and technicians which are needed  
6 during startup, but they are supervised by LP&L.

7 The tests are carried out under a test  
8 director. And this is just typical, this part of the  
9 slide is typical of INC, but there is no room on the  
10 slide to show it.

11 But, for example, when electrical maintenance  
12 tests are carried out by input from the startup  
13 organization, who develops the startup test procedure  
14 and carries out the schedule and does that kind of work,  
15 from the maintenance electrical department which  
16 provides the craft and personnel to do the test, and  
17 finally from the station operations department, all of  
18 which are in effect now all under the direct control of  
19 LP&L.

20 So we felt we had an integrated organization  
21 between contractors and LP&L people for the startup  
22 period, at least for prerequisite and preoperational  
23 tests.

24 (Slide)

25 Furthermore, as we go down the line, we will

1 be getting into integrated testing where we start to  
2 test groups of systems together, such as hot functional  
3 testing and the test which follows fuel load. During  
4 that period the biggest interface will be with our tech  
5 support department and a similar type organization will  
6 exist.

7 This is the organization we plan to use for  
8 integrated testing. Again, the solid lines are LP&L.  
9 We expect to get some help from the nuclear project  
10 support people and from Mid-South. But these are  
11 permanent people available to the project.

12 The dotted line represents contract  
13 personnel. And the direction for startup comes from the  
14 people who develop the procedures and schedule, the same  
15 as in the preoperational/prerequisite test.

16 Close coordination -- down in the integrated  
17 shift test organization or the shift itself, you will  
18 see that there was close coordination between the shift  
19 test director and the shift supervisor, who really will  
20 be working as a team to carry out these integrated  
21 tests.

22 (Slide)

23 Again, direct control of Louisiana Power and  
24 Light --

25 MR. BENDER: Excuse me, could I get a little

1 clarification on the way in which these integrated test  
2 teams work? I presume you have people there from  
3 Combustion Engineering, and you have somebody there from  
4 the turbine supplier.

5 MR. LESTER: For those kinds of tests, yes.

6 MR. BENDER: When you have an integrated team  
7 like that, how do these contractor personnel work with  
8 your organization?

9 MR. LESTER: The CE reps who are there, CE  
10 reps will be in an advisory role. It turns out that the  
11 unit coordinator for operational testing, this fellow  
12 right here, is a Combustion Engineering man, has been  
13 through several startups, but he works now directly for  
14 my lead startup engineer. So he will be working, and he  
15 has more CE people in his group, he will be working  
16 direction for my startup manager.

17 (Slide)

18 Now, the CE rep that shows on the shift  
19 organization is more like the vendor's rep, to keep  
20 warranties straight and to make sure that the technical  
21 advice required during the startup is carried out.

22

23

24

25

1                   MR. BENDER: And the startup test reports,  
2 they are developed by whom?

3                   MR. LESTER: By LP&L, but we will get help  
4 from CE and others, and reviewed by the plant operating  
5 review committee.

6                   MR. BENDER: Thank you.

7                   (Slide)

8                   MR. LESTER: Finally, as we get beyond the  
9 test program and into operation, which your letter  
10 addressed, we will have a shift organization which looks  
11 like this. Right now, frankly, I do not expect to have  
12 any of those positions filled with contract personnel  
13 other than the security area which we plan to use  
14 contract forces on.

15                  I think the qualified ROs and SROs that we  
16 havee hired recently, and the fact that I have, I  
17 believe, an adequate number of cold-license candidates,  
18 will allow me to operate solely with LP&L people. Of  
19 course, if we run into problems, I think there are  
20 contract people available.

21                  But again, we are shooting for a six-shift  
22 organization, and I think we have got enough people to  
23 man six shifts.

24                  (Slide)

25                  By the way, that shift is capable of handling

1 all the normal and off-normal conditions. The security  
2 response force, the fire brigade, and those elements of  
3 the shift requirements.

4                   MR. BINFORD: Earlier, it was indicated that  
5 you were going to have or try to have someone with NSSS  
6 experience on each shift. Would you say something about  
7 that?

8                   MR. LESTER: I believe what was said was that  
9 we will have in operation a commercially experienced  
10 individual. I do not think we mentioned anything about  
11 the NSSS guy. No, we did not intend that. What was  
12 intended there was that the six previously licensed ROs  
13 and SROs would fulfill that commitment.

14                  MR. BINFORD: What do you mean by "previously  
15 licensed"? You mean people on your payroll that have  
16 been licensed at other plants?

17                  MR. LESTER: Yes, sir, we got them in those  
18 positions.

19                  MR. BINFORD: All right, I guess that answers  
20 it.

21                  MR. CARBON: Are they from other CE plants?

22                  MR. LESTER: I have three from B&W plants, one  
23 from a CE plant, and -- I am sorry, more than three. I  
24 have got three from Westinghouse, two from B&W, and one  
25 from CE. All PWR.

1           MR. BINFORD: They would not necessarily be  
2 the shift supervisor?

3           MR. LESTER: Yes, they would. We have what we  
4 call a nuclear operations supervisor, and we have 12 of  
5 those allowed. So the shift supervisor will be an  
6 administrative thing, and one of those 12 will be  
7 assigned to shift supervisor. The other on shift will  
8 be the control room supervisor, as shown on this slide.

9           So when you say will they be the shift  
10 supervisor, I would have to say sometimes and sometimes  
11 not.

12           (Slide)

13           MR. BENDER: Would they be in one of those top  
14 blocks?

15           MR. LESTER: Yes, sir.

16           (Slide)

17           MR. WARD: Let us see, I would like to finish  
18 up all of the presentations by 1:30 so that we have a  
19 little time to discuss it and talk about what  
20 presentations we would like in the full committee  
21 meeting. So if time yourselves so that --

22           MR. LESTER: I can wrap up very quickly.

23           The next slide shows several of the areas that  
24 are involved in conduct of operations. These last five  
25 bullets here represent the TMI action items. I believe

1 that we have most of those in order. We have addressed  
2 them all.

3                 This one down here, shift supervisor  
4 responsibility, still requires the issuance of a formal  
5 management statement, which I have drafts of but I am  
6 taking my time and trying to make sure that thing is  
7 right, so that we indicate his authority.

8                 I did not intend to discuss any of those  
9 except maybe just briefly the shift technical adviser  
10 program.

11                 (Slide)

12                 I think we are approaching the shift technical  
13 adviser from the point of view that if we are going to  
14 have STAs, we are going to make good use of them. That  
15 is why I have assigned an STA coordinator. He has  
16 selected 18 people who have pretty good experience.

17                 That is not commercial nuclear experience.

18 There is no commerical nuclear experience. But several  
19 of these fellows are former officers of the watch in the  
20 Navy, so at least they know how nuclear plants operate.

21                 They are going through a significant training  
22 program. They have been in that since October, and they  
23 will not finish until May, full-time. We plan to use  
24 these folks prior to fuel loading in a capacity in that  
25 integrated test organization following fuel loading.

1           We expect to have six of the most qualified  
2 people on shift rotation with some of the junior STAs as  
3 trainees, to give them the period between fuel load and  
4 commercial operation as an experience base prior to  
5 putting them on watch alone, at which time I think we  
6 are going to go to the 24-hour-duty-day basis. We feel  
7 comfortable that the program is good.

8           (Slide)

9           In addition, the communications for STAs is  
10 within the assistant plant manager operations and  
11 maintenance organization, so that STA feedback can be  
12 used in the operations department. I think if there are  
13 differences there, they can easily be resolved.

14           I would like to just summarize by making the  
15 point that as a plant staff goal for this year I have  
16 established a goal to develop a performance measurement  
17 system. I think really management capability is  
18 something which you really cannot make a determination  
19 on until you see some of the results.

20           That performance measurement system will  
21 include such things as radiation exposure, man-rem  
22 exposure, and will include availability, capacity  
23 factor, safety from an industrial and a nuclear point of  
24 view, and plant efficiency, and those kinds of  
25 parameters.

1           We are just now developing the system, so I  
2 think until we have maybe a year or two under our belts,  
3 it is going to be kind of difficult for us to measure  
4 our management capability. However, I believe that we  
5 now have a team for Waterford 3 that will make our staff  
6 get good marks on their performance indication system,  
7 and there is no reason, in my opinion, why we cannot  
8 stand among the top in the nuclear utilities in the  
9 country.

10           I would be glad to answer any questions you  
11 might have.

12           MR. WARD: Any questions?

13           (No response)

14           MR. WARD: Okay, thank you, Mr. Lester.

15           I think we need a break, but we will not take  
16 one. Let us plunge on ahead.

17           (Slide)

18           MR. IYENGAR: Good afternoon. My name is  
19 Krishna Iyengar. I am the engineering supervisor for  
20 technical services for the nuclear project support  
21 group. And I am here to respond to the three questions  
22 that the ACRS specifically asked of us with regard to  
23 the reactor vessel monitoring system proposed to be  
24 installed at Waterford.

25           The three questions that we have been asked

1 are: How did we go about selecting the system, our  
2 plans to incorporate, to use this; and thirdly, our  
3 plans to incorporate this into emergency operating  
4 procedures. I will address each of these separately.

5 (Slide)

6 In early 1981, in response to NUREG-0731, we  
7 looked at the various systems available within the  
8 industry. The survey narrowed down to three main  
9 systems. These were the ex-vessel neutron detector, the  
10 delta system developed by Westinghouse, and the third is  
11 the heated-junction thermocouple.

12 We contacted the utility that was planning to  
13 use this ex-vessel neutron detector, and based on the  
14 information that we obtained from them we decided that  
15 was not the right system.

16 Then we contacted Westinghouse directly, and  
17 for reasons stated here on the slide, it was also deemed  
18 unacceptable.

19 The system that we arrived at, basically by  
20 process of elimination, was the heated-junction  
21 thermocouple system developed by CE as a part of the CE  
22 owners group effort.

23 You have got to keep in mind that CE itself,  
24 in developing this, looked at the other systems before  
25 recommending this system to the CE owners group. I

1 think I have here a model -- if I open it from the right  
2 end -- of the heated-junction thermocouple probe. I am  
3 going to pass this around in case anybody wants to look  
4 at it.

5 (Slide)

6 The next slide addresses our present plans for  
7 using RVLMS. At present our main intention is to use  
8 this as another instrument from which an operator can get  
9 some information and use the operation from RVLMS as a  
10 source of corroboration of information obtained from  
11 other instruments. And as the operator develops  
12 confidence with the system, they may address how this  
13 can be adapted for other specific uses.

14 So in conclusion, at this point in time we  
15 have not identified any specific use for the  
16 heated-junction thermocouple system except that in the  
17 future it will be used to indicate water level above the  
18 top of the fuel alignment plate, to indicate the  
19 approach to and recovery from inadequate core cooling  
20 condition.

21 MR. WARD: I guess the major question that  
22 most people have with this or any system is how  
23 effective it is in the nontranquill situation, in the  
24 dynamic situations or the many situations which might be  
25 possible in an accident. How accurate will this be in

1 indicating the true water level of interest?

2 MR. IYENGAR: The response to that is being  
3 addressed. The research is still ongoing. We do not  
4 have a system that everything has been looked at. That  
5 is not the status. CE is still looking into it as part  
6 of the owners group effort.

7 MR. BENDER: Maybe you could answer this  
8 question. What criteria are you using to judge its  
9 adequacy?

10 MR. IYENGAR: I have got a backup slide that  
11 CE uses as a design basis. If you want me to present  
12 it, I will show it to you.

13 (Slide)

14 This is from a slide that CE used for  
15 presentation to the NRC on February 18

16 MR. WARD: Do you endorse that?

17 MR. IYENGAR: Well, I do not see anything  
18 wrong with it. And as a part of the owners group with  
19 which we are actively involved, we are looking into all  
20 these aspects.

21 MR. BENDER: Well, let me just try again. How  
22 accurate should its measurement capability be?

23 MR. IYENGAR: That is something again we have  
24 not specifically addressed yet, which will have to be  
25 done collectively between CE and all the other owners

1 group members.

2 MR. BENDER: Well, when you decided to put it  
3 in, did you have in mind some capability for it?

4 MR. IYENGAR: Well, it should satisfy the  
5 requirements stated in 202 of NUREG-0737.

6 MR. BENDER: So you are putting it in in  
7 direct response to the regulation?

8 MR. IYENGAR: Yes. Again, it might have some  
9 other use later on. But right now, that was the main  
10 intention.

11 MR. BENDER: So we should measure its adequacy  
12 by what is in the regulation? Is that a fair assessment  
13 of how you would judge it?

14 MR. IYENGAR: Well, that is probably a  
15 necessary condition, but not sufficient. We have other  
16 means to look into whether it is really sufficient so we  
17 can install it in the plant.

18 MR. BENDER: Since there is an R&D program  
19 ongoing, what is the R&D program intended to show?

20 MR. IYENGAR: Okay, at present CE is scheduled  
21 to get the prototype portion of this -- this is not the  
22 prototype -- and then they have to do a series of tests  
23 to basically demonstrate that everything that has been  
24 shown earlier on the proof of principle test is  
25 reproducible. And then there are things like

1 qualification criteria, the instances where it could  
2 give ambiguous readings. So a lot of research has to be  
3 done in that area.

4 MR. BENDER: Thank you.

5 MR. BINFORD: Let me ask one question.  
6 Suppose you install this thing and you rely upon the  
7 information, and it lies to you. How much trouble are  
8 you in?

9 MR. IYENGAR: Okay, that is where the operator  
10 confidence comes into the picture. He will not take any  
11 specific action based on just this one piece of  
12 information. This would be just an additional source of  
13 information that he is going to get from various other  
14 instruments that he has.

15 And he is going to use his technical judgment  
16 as to whether it is reliable or not, and his action will  
17 be contingent upon the information obtained from all  
18 relevant pieces of instrumentation rather than just one  
19 source of information.

20 MR. DRUMMOND: If I may, I would like to make  
21 a point. We are making provisions to put the  
22 instrumentation in the reactor vessel head now. But we  
23 are not going to use this instrumentation during this  
24 continued R&D program to prove that it is something that  
25 is detrimental to safety -- if it proves detrimental to

1 safety.

2 MR. BENDER: Mr. Drummond, just a personal  
3 observation. I do not feel very comfortable wth the  
4 impression that I have gotten that the main reason why  
5 this thing is adequate is because it meets whatever is  
6 in the regulatory requirements.

7 That is the reason why we have challenged the  
8 usefulness of it. And it bothers me some that -- and it  
9 is not peculiar to Waterford, I think it is true of most  
10 of the utilities -- that they are still a long way from  
11 seeing what the purpose of the device is beyond  
12 complying with regulations.

13 And it certainly would be helpful to many of  
14 us if we could see some more perceptive understanding of  
15 where a device like this could help. If it does not  
16 help, it ought not be put in, no matter if it is  
17 misleading. But that is just my personal viewpoint.

18 MR. DRUMMOND: I think we at LP&L follow that  
19 viewpoint and are making provisions in the reactor  
20 vessel head, is to avoid the problems that might come in  
21 subsequent times when the reactor vessel head is hot in  
22 terms of man-rem exposure. But unless we feel  
23 comfortable that it is going to be a valid instrument,  
24 we are not going to put it in, I am sure.

25 MR. IYENGAR: Again, I say there are necessary

1 conditions that must meet the regulatory criteria. But  
2 that is not sufficient.

3 (Slide)

4 The next slide I have is proposed plans for  
5 incorporating RVLMS into emergency operating  
6 procedures. We are working with CE as a CE OG member in  
7 the development of generic operating guidelines. And we  
8 will evaluate these generic emergency guidelines once  
9 they are developed to plant-specific applicability for  
10 Waterford. And only after we are convinced that it is  
11 not going to be detrimental to the safe operation of the  
12 plant will we consider using these emergency  
13 procedures.

14 (Slide)

15 In conclusion, our activities related to this  
16 system are depicted on this slide. We have contracted  
17 CE to do the necessary modification for the reactor  
18 vessel head so that the probe can be installed at a  
19 later time.

20 Second, we have placed orders with CE for the  
21 heated-junction thermocouple system. We are working as  
22 a CE OG member in developing emergency guidelines, and  
23 we will install the heated-junction thermocouple system  
24 upon assurance of operability at Waterford. And lastly,  
25 we will keep abreast of the developments at NRC and ACRS

1 in this regard.

2 MR. WARD: Are there any further questions?

3 (No response)

4 MR. WARD: Okay, thank you.

5 Mr. McLendon.

6 MR. MC LENDON: I am Gerald McLendon, senior  
7 vice president of Louisiana Power and Light Company. I  
8 want to thank the subcommittee for allowing us to  
9 discuss our nuclear division with you today. We feel  
10 that we have made significant progress since last August  
11 by accomplishing these items.

12 (Slide)

13 I think the major one is that we formed a  
14 nuclear operations department. The vice president in  
15 charge of that department is on site where he can make  
16 timely decisions. We have put together an integrated  
17 LP&L and contract team with nuclear experience to test  
18 and start up Waterford 3.

19 We have made a significant -- we have made a  
20 significant increase in the nuclear experience within  
21 the LP&L organization.

22 Our aggressive recruiting program has been  
23 successful in hiring quality personnel. We obtained a  
24 highly qualified professional to direct our training  
25 program. Dr. Sabri came to us in December, and when she

1 came to us, she came with specific plans for a training  
2 program. We feel like we are very fortunate to have her  
3 with us.

4 We feel like the involvement of all of the  
5 LP&L staff as well as our board of directors of  
6 Waterford 3 is a plus and gives the entire company an  
7 appreciation of the magnitude of Waterford 3.

8 We have added recognized experts to our safety  
9 review committee. We feel like we have a blue-ribbon  
10 committee. And this is not just in name only. These  
11 are active participants in the committee, and we feel  
12 like they bring a lot of experience to Waterford 3.

13 We believe that we have reacted to your last  
14 August report in a responsible and expeditious manner,  
15 and we feel like we will be able to complete Waterford 3  
16 and operate it in a safe manner.

17 I will be glad to respond to any further  
18 questions you might have.

19 MR. WARD: Are there any questions for Mr.  
20 McLendon?

21 (No response)

22 MR. WARD: Okay, thank you.

23 Before anyone goes, let me say what I am going  
24 to say.

25 Dick, we need to do two things. First, I want

1 to hear the summary of comments from each of our  
2 consultants; and then we need to have a couple of  
3 minutes to discuss the presentations we would like the  
4 people involved here to make at the full committee  
5 meeting tomorrow.

6 Now, let me ask first, does that answer your  
7 question, Dick, or did you have something else you  
8 wanted to bring up?

9 MR. PEARSON: You just said you are going to  
10 ask us for our comments to Louisiana Power and Light?

11 MR. WARD: Yes. You will not be here  
12 tomorrow, and I would like to get your comments now  
13 before you leave on what you have heard today.

14 MR. PEARSON: Do you want me to start?

15 MR. WARD: Okay. Alphabetically, Dick goes  
16 before Frank.

17 MR. PEARSON: Okay, I do have some  
18 observations and perhaps some food for thought here.  
19 One, I am impressed with the credentials of your  
20 recently acquired training director. I would observe  
21 that being a professor -- and I am one also -- does not  
22 necessarily make an individual a training director. Nor  
23 does being an old air traffic controller, an old pilot,  
24 make them training directors, although they often become  
25 training directors -- at least with the FAA they do.

1 And neither do engineers necessarily make good training  
2 directors.

3 In short, what I am trying to point out is  
4 that the job of training director is that of the  
5 specialist in training research methodology. I guess in  
6 that regard I am impressed with the variety of interests  
7 and initiatives that Dr. Sabri has undertaken and wonder  
8 whether the title of training director is an appropriate  
9 one, in that case.

10 Mr. Ward has raised some issues about the  
11 people-problems side of the house, and I agree with  
12 those. I think there are a lot of other issues that we  
13 have not touched on today. We did not hear much more  
14 about the subject of performance appraisal, for  
15 example.

16 I would, I guess, in conclusion -- well, let  
17 me back up and say, first of all, NUREG-0731, in my  
18 mind, is not the world's best document in providing  
19 guidance to utilities in terms of management structure.  
20 I think it needs to be more specific. I gather it is  
21 still considered a draft manuscript, still open for  
22 review.

23 But in that context, I think the kind of  
24 things that we have kicked around at least here with the  
25 staff today where I think there is some unhappiness lies

1 in the area of what I would call human resources  
2 development in management. The whole issue of personnel  
3 of development, selection, training, performance  
4 appraisal, management development, stress management,  
5 shift scheduling, those kinds of issues.

6           And my food for thought is I would be happier  
7 if some utility had a big block called human resources  
8 development and management rather than training, per  
9 se.

10           MR. BINFORD: Well, I would echo Dick's  
11 remarks on the training director that they have  
12 obtained.

13           I guess my only concern about what we heard  
14 about training -- not my only concern, but one concern  
15 was we heard a good deal about philosophy, and, yes, I  
16 agree with that, but very little about the nuts and  
17 bolts of the procedures that are going to be followed to  
18 actually do the training.

19           That would bother me more except for the fact  
20 that as far as I can make out, the training is being  
21 carried out even though it is under the direction of  
22 LP&L's training director by experienced and apparently  
23 well-qualified professional consulting organizations.

24           I am familiar with both of the organizations  
25 they are using, and I can say so far as I know they do a

1 fine job. So this relates a little bit of my problem  
2 initially. I have no doubt that down the road a piece  
3 they will develop a pretty good training program. They  
4 seem to have the makings of it.

5                 The other area where I have some concern, I  
6 think, is in the amount of experience that the operating  
7 organization and the support organization has with  
8 respect to actual operation of a commercial nuclear  
9 power plant.

10               Now, I guess we all realize that people with  
11 that kind of experience are sort of in short supply, and  
12 one has to make do with the best one can so you can  
13 generate your own experience.

14               But, for example, in the operations group,  
15 only 13.3 percent years of experience in the nuclear  
16 business were actually in the commercial nuclear power  
17 plant operation. And this does bother me just a little  
18 bit.

19               Five years from now, if everything goes all  
20 right, they will have plenty. But I think I am a little  
21 bit concerned about that.

22               MR. WARD: Okay. Thank you, Frank.

23               Before asking for comments from the other  
24 members of the committee, let me first suggest an agenda  
25 for tomorrow, and perhaps we can adjust that as we get

1 comments from the other committee members.

2 We have allotted two hours on Thursday from  
3 2:15 to 4:15. As you have experienced with us, that  
4 2:15 starting time is approximate. We can probably  
5 guarantee it will be no earlier than that.

6 I think what I would like to suggest is that  
7 the staff start out with about ten minutes, and I think  
8 that should be the total time. We will try to keep  
9 questions from the committee that should go to the  
10 applicant going to them instead of to you.

11 And I do not think we will cover the POPV  
12 thing, but just the major issues of the presentation.

13 Do you want Mr. Benedict to do that? Or  
14 whatever you want. But just about ten minutes.

15 And then perhaps if LP&L could plan on about  
16 60 minutes of presentation time, and that will give some  
17 allowance for questions and discussion from the full  
18 committee.

19 I would suggest that you cover at least the  
20 following points: the management commitment; the  
21 organization changes that you have made, including a  
22 comment on your safety review committee; the training  
23 emphasis; your staff and recruiting status; and then the  
24 integration of the contractor's organization into your  
25 organization for startup and so forth, initial

1 operation.

2           I would suggest that you be prepared to answer  
3 questions on the instrumentation for inadequate core  
4 cooling, but we will not start out with the presentation  
5 there unless I hear something different here from the  
6 other members.

7           I would also suggest that you be prepared to  
8 answer questions on another point which was raised in  
9 our letter; and that is, the environmental accident,  
10 environmental effect on your essential electrical  
11 equipment in containment. This is a question I think  
12 that was expressed as the impact of loss of space  
13 cooling and primary system leakage and electrical  
14 equipment.

15           If you do not have all the answers on that,  
16 questions are likely to come up, and I would be prepared  
17 to respond as to what your program is and so forth on  
18 that.

19           Okay, let me ask the other members of the  
20 committee now for any comments on that agenda and any  
21 general comments. Mr. Ray.

22           MR. RAY: I think the agenda is a good one. I  
23 think there will still be difficulty in staying within  
24 the time limit. But it is certainly a good target.

25           I have been impressed by the fact that

1 Louisiana Power and Light has shown responsiveness to  
2 our comments. And I sense in the presentations I have  
3 heard and seen an aggressive effort to meet the  
4 requirements and the deficiencies that have been  
5 signaled.

6 I do believe they have made progress in  
7 staffing, but I still believe they are significantly  
8 short in some critical functional areas, health physics  
9 being one of them.

10 And they have shown on their own part an  
11 awareness of where they are short of commercial  
12 experience and have expressed concern for this and  
13 intend to aggressively address it with the ultimate plan  
14 to supplement their personnel in areas where experience  
15 is short with contracted experienced personnel.

16 And I honestly cannot see any other approach  
17 to the overall situation.

18 MR. WARD: Okay. Thank you, Gerry.

19 Max.

20 MR. CARBON: I guess I have little to add. I  
21 share the thought that it is going to be difficult to  
22 accomplish all of this in a couple of hours. I  
23 personally would suggest that we might omit  
24 administrative services perhaps, and discussion of the  
25 quality assurance and leave --

1                   MR. WARD: Okay, let us see, the discussion on  
2 organization, I wanted to leave that pretty much up to  
3 you. But Dr. Carbon is suggesting as long as you point  
4 out where the QC organization fits in and the fact that  
5 you have the administrative services organization there  
6 and its purpose, you probably do not need to spend a lot  
7 of time explaining what each of those does. I think  
8 that is a good point. QA, I am sorry, QA. Excuse me.

9                   Anything else, Max?

10                  MR. CARBON: No.

11                  MR. WARD: Mike?

12                  MR. BENDER: I do not think I have much to  
13 add, Dave. It might be a good idea if the applicants  
14 were prepared to respond to the question on systems  
15 interaction PRA and emergency procedures, because I  
16 think questions will be asked.

17                  I do not suggest that you try to make prepared  
18 statements, but I have no doubt that some members will  
19 ask about what you are doing, and some understanding of  
20 what the questions are will have some use to the  
21 committee.

22                  I really think while the committee may not be  
23 interested in hearing it, that it would be worthwhile  
24 for Waterford to work a little harder in trying to  
25 establish what it is going to be self-sufficient in and

1 what it is going to rely on Mid-South's services to do,  
2 and what things it will impact rely on contractors for.

3 I do not believe that matter will come up at  
4 the full committee meeting, but it may show up in a  
5 letter that is written, if one is written.

6 I think it would be unfair to ask the training  
7 director to have developed a complete training program  
8 in a couple of months that she has been there. I think  
9 she has the right slant on things. And given that there  
10 is adequate funding in time and fair distribution of  
11 interest, the training program will turn out to be the  
12 right kind.

13 And from my viewpoint, even though it would be  
14 nice to have somebody that would spend a lot of time  
15 training plant-type personnel, you cannot have  
16 everything in a training director. And you can get  
17 those resources from other places if you want them.

18 My feeling is that Waterford has made some  
19 important strides since we heard from them the last  
20 time. That is all I have got.

21 MR. WARD: Okay, thank you, Mike.

22 Let's see, Mike suggested you be prepared for  
23 questions on systems interaction and PRA.

24 And by "emergency procedures," Mike, are you  
25 anticipating some on the off-site procedures or plant

1 procedures?

2                   MR. BENDER: Plant procedures, those things  
3 that -- the criteria and guidance that has been  
4 developed by CE and will eventually be incorporated in  
5 the procedures.

6                   MR. WARD: Okay. I think there is a chance  
7 that a question on your off-site planning could come up,  
8 too, so be prepared for that.

9                   Okay, is there anything else?

10                  (No response)

11                  MR. WARD: All right, thank you all for your  
12 patience and help. Thank you.

13                  (Whereupon, at 1:40 p.m., the Subcommittee was  
14 adjourned.)

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

In the matter of: ACRS - SUBCOMMITTEE ON WATERFORD STEAM ELECTRIC STATION

Date of Proceeding: March 3, 1982

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

Place of Proceeding: Washington, D. C.

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

Ann Riley

Official Reporter (Typed)

  
\_\_\_\_\_  
Official Reporter (Signature)

STATUS OF "FEED AND BLEED"  
ISSUE FOR WATERFORD AND OTHER  
CE PLANTS

- o ACRS LETTER ON PALO VERDE/CESSAR RAISED QUESTION IF PORV ISSUE FOR CE PLANTS SHOULD BE ACCELERATED FROM A-45 RESOLUTION PLAN
- o GINNA EVENT CAUSED STAFF TO REEVALUATE NEED FOR PORVs
- o F. ROWESOME MEMORANDUM SHOWED BENEFIT OF PORVs
- o STAFF AGREED ISSUE SHOULD BE GIVEN SPECIAL ATTENTION
- o LETTER SENT FROM EISENHUT TO CE REQUESTING CE REEVALUATE THEIR POSITION
- o STAFF EXAMINING BENEFITS/DRAWBACKS TO PORVs IN CE PLANTS

PORV's

BENEFITS

- "FEED AND BLEED" DECAY HEAT REMOVAL CAPABILITY IN EVENT OF LOSS OF ALL FW
- AID DECAY HEAT REMOVAL IN EVENT OF RUPTURES IN MULTIPLE STEAM GENERATORS
- AID DECAY HEAT REMOVAL IN EVENT OF SGTR AND SECONDARY SIDE BREAK
- AID IN LOW TEMPERATURE OVERPRESSURE PROTECTION
- ADDED ATWS MITIGATION CAPABILITY

DRAWBACKS

- ADDING PORVs INCREASES SBLOCA PROBABILITY
- USE OF PORV POTENTIALLY COMPLICATES SOME EMERGENCY OPERATIONS
- LIMITED PRA 's DO NOT SHOW CLEARCUT NEED FOR IMPROVING DECAY HEAT REMOVAL RELIABILITY
- INCREASED COSTS

Table 13.1-2

Nuclear Operations Staffing

	Approved Staff	Personnel On Board	2/15/82
<u>Nuclear Operations</u>			
Staff	2	2	
<u>Plant Operations</u>			
Staff	10	8	10
Startup	14	11	
Maintenance	76	61	63
Operations	67	52	60
Technical Support	47	31	
Health Physics	17	13	14
Quality Control	6	6	
Total	<u>249</u>	<u>184</u>	<u>197</u>
<u>Project Support</u>			
Staff	2	2	
Construction Engrg.	12	5	7
Operational Engrg.	26	9	10
Technical Services	15	6	9
Onsite Safety Review	9	1	4
Licensing	13	4	
Total	<u>77</u>	<u>27</u>	<u>38</u>
<u>Training</u>			
Staff	11	6	
<u>Quality Assurance</u>			
Staff	21	10	14
<u>Administrative Services</u>			
Staff	59	40	51
Totals	<u>407</u>	<u>267</u>	<u>306</u>

AGENDA FOR MARCH 3, 1982 ACRS

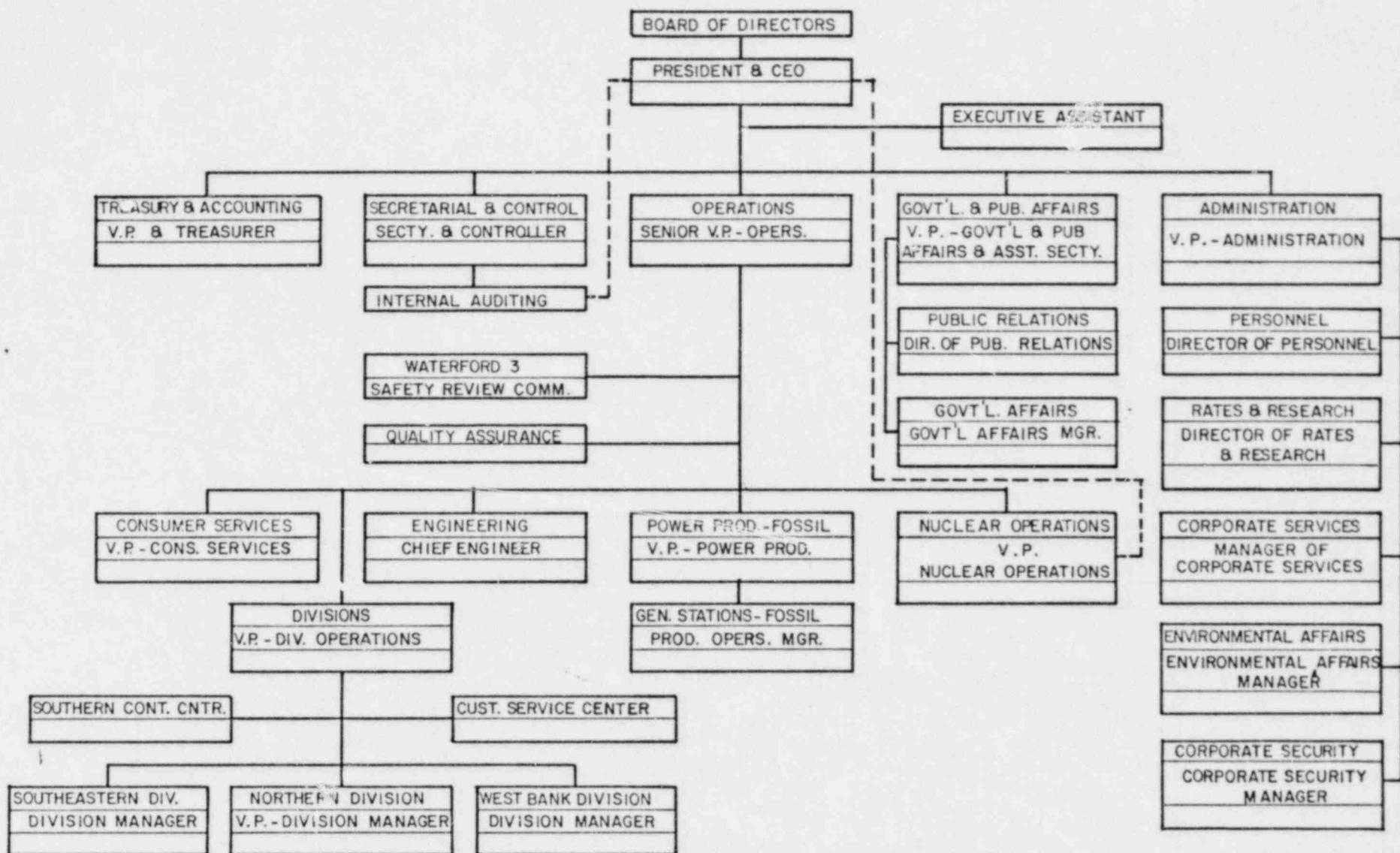
LPL-ACRS  
3/3-4/82

- INTRODUCTION (5 MIN.) J.M. WYATT - PRESIDENT & CHIEF EXECUTIVE OFFICER
- CORPORATE OVERVIEW (10 MIN.) G.D. McLENDON - SR. VICE PRESIDENT - OPERATIONS
- NUCLEAR OPERATIONS (15 MIN.) L.V. MAURIN - VICE PRES. NUCLEAR OPERATIONS
- PROJECT SUPPORT (10 MIN.) F.J. DRUMMOND - PROJECT SUPPORT MANAGER
- TRAINING (15 MIN.) Z.A. SABRI - NUCLEAR TRAINING DIRECTOR
- ADMINISTRATIVE SERVICES (7 MIN.) J. SLEGER, JR. - NUCLEAR ADMIN. SERVICES MANAGER
- PLANT STAFF (15 MIN.) D.B. LESTER - PLANT MGR.
- QUALITY ASSURANCE (10 MIN.) T.F. GERRETS - QUALITY ASSURANCE MANAGER
- RVLM SYSTEM (10 MIN.) K. IYENGAR - TECHNICAL SERVICES ENGINEERING SUPV.
- CLOSING REMARKS (3 MIN.) G.D. McLENDON - SR. VICE PRESIDENT - OPERATIONS

CORPORATE OVERVIEW

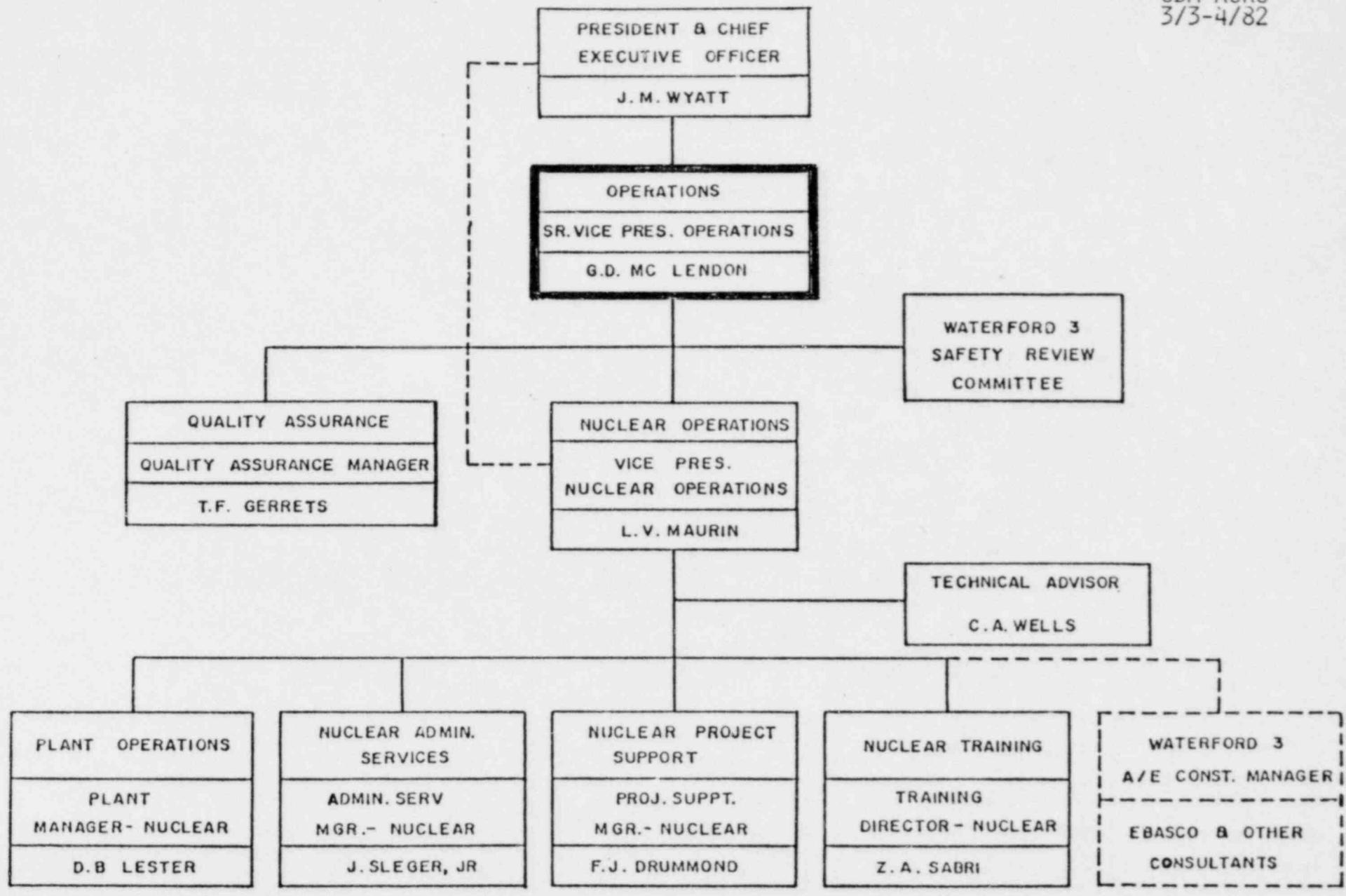
- OVERALL CORPORATE ORGANIZATION
- RESPONSIBILITY AND AUTHORITY OF VICE PRESIDENT -  
NUCLEAR OPERATIONS DEPARTMENT
- CORPORATE COMMITMENT TO NUCLEAR OPERATIONS DEPT.

## LOUISIANA POWER & LIGHT COMPANY



----- DIRECT COMMUNICATIONS DURING EMERGENCIES

GDM-ACRS  
3/3-4/82



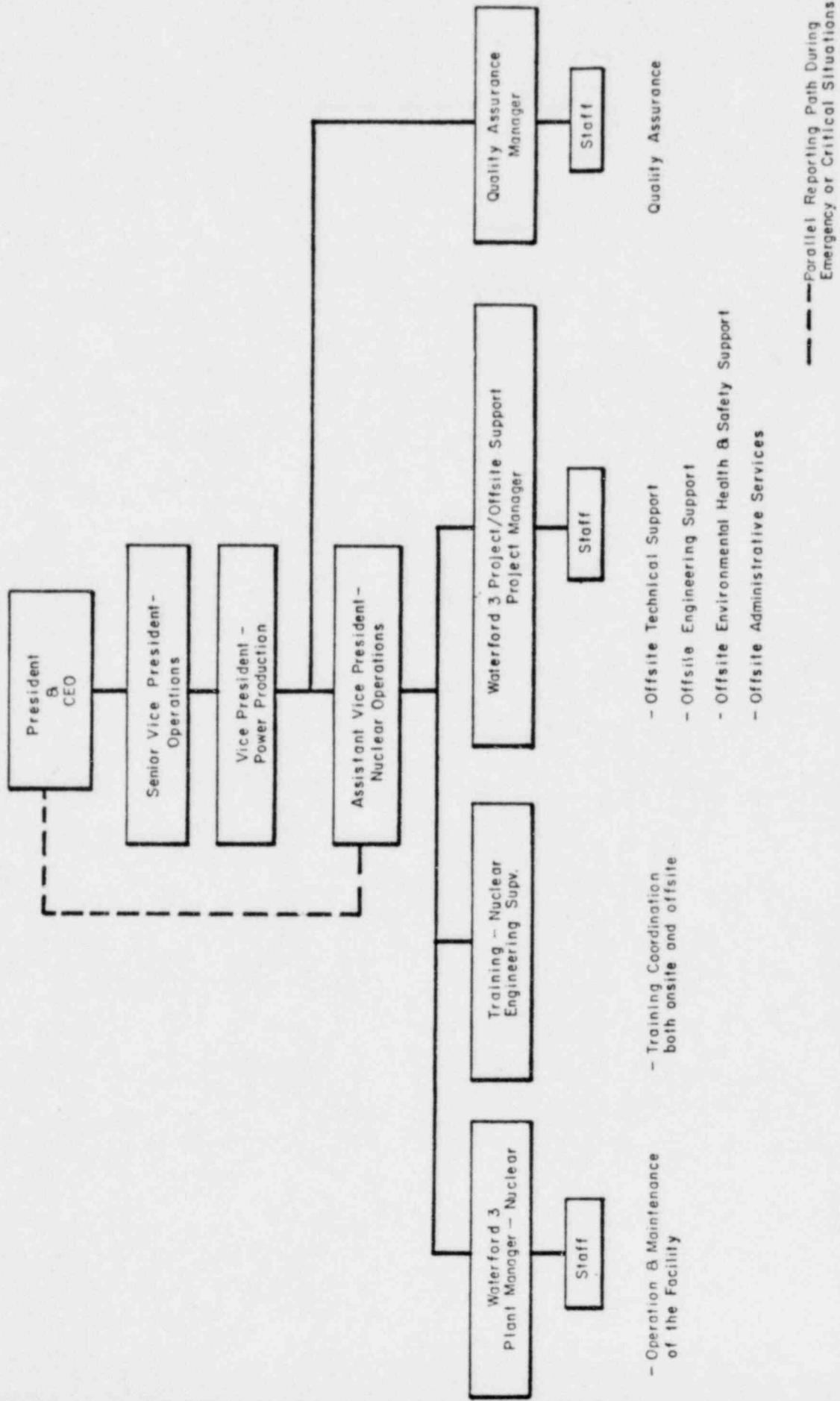
----DIRECT COMMUNICATIONS DURING EMERGENCIES

NUCLEAR OPERATIONS DEPARTMENT

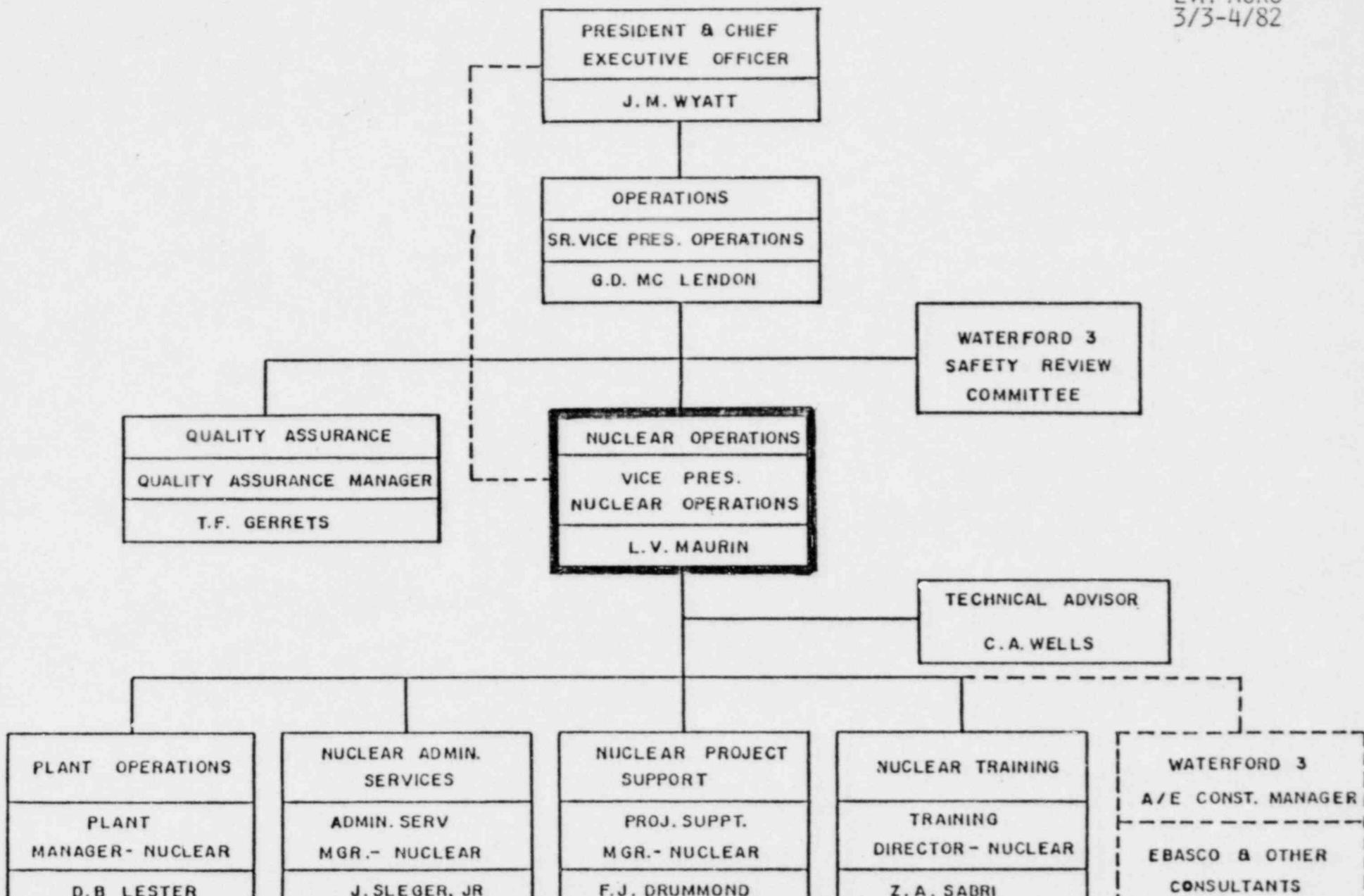
- ④ ORGANIZATION CHART AND CHANGES SINCE 8/6/81  
ACRS
- ④ COMPARISON WITH ORGANIZATIONAL STRUCTURE IN  
NUREG 0731
- ④ RECRUITING AND STAFFING

8/6/81  
LVM

L P B L WATERFORD 3 CORPORATE ORGANIZATION



LVM-ACRS  
3/3-4/82



----DIRECT COMMUNICATIONS DURING EMERGENCIES

RESUME

JOE SLEGER, JR.

- RETIRED COLONEL U.S. MARINE CORPS
- QC INSPECTOR SLINE PAINTING W-3
- QC SUPERVISOR SLINE PAINTING W-3
- QC MANAGER SLINE PAINTING W-3
- LP&L QA ASSOCIATE ENGINEER
- GENERAL SUPPORT SUPERINTENDENT W-3
- ADMINISTRATIVE SERVICES MANAGER - NUCLEAR W-3

RESUME  
DR. Z.A. SABRI

LVM-ACRS  
3/3-4/82

- PHD (1972) NUCLEAR ENGINEERING, MINOR IN CHEMICAL ENGINEERING, UNIVERSITY WISCONSIN
- BSC (1966) ELECTRICAL ENGINEERING, UNIVERSITY OF ALEXANDRIA
- MSC (1969) NUCLEAR ENGINEERING, UNIVERSITY OF WISCONSIN
- PROF. OF NUCLEAR ENGINEERING & DIRECTOR OF NUCLEAR SAFETY RESEARCH GROUP, ISU
- MEMBER OF IEEE STANDARDS 5.5 WORKING GROUP DEVELOPING STANDARDS ON HUMAN PERFORMANCE IN LWR
- ADVISOR TO NRC-NRR DIVISIONS OF HUMAN FACTORS SAFETY AND OPERATIONAL DATA EVALUATION
- MEMBER OF THE EXECUTIVE COMMITTEE, TECHNICAL GROUP ON HUMAN FACTORS SAFETY, ANS
- DIRECTOR OF THE HUMAN FACTORS AND NUCLEAR SAFETY ANALYSIS DIVISION, TECHNOLOGY INTERNATIONAL INCORPORATED
- ADVISOR TO INPO, CRITERIA & ANALYSIS DIVISION

RESUME  
DR. Z.A. SABRI  
(CONTINUED)

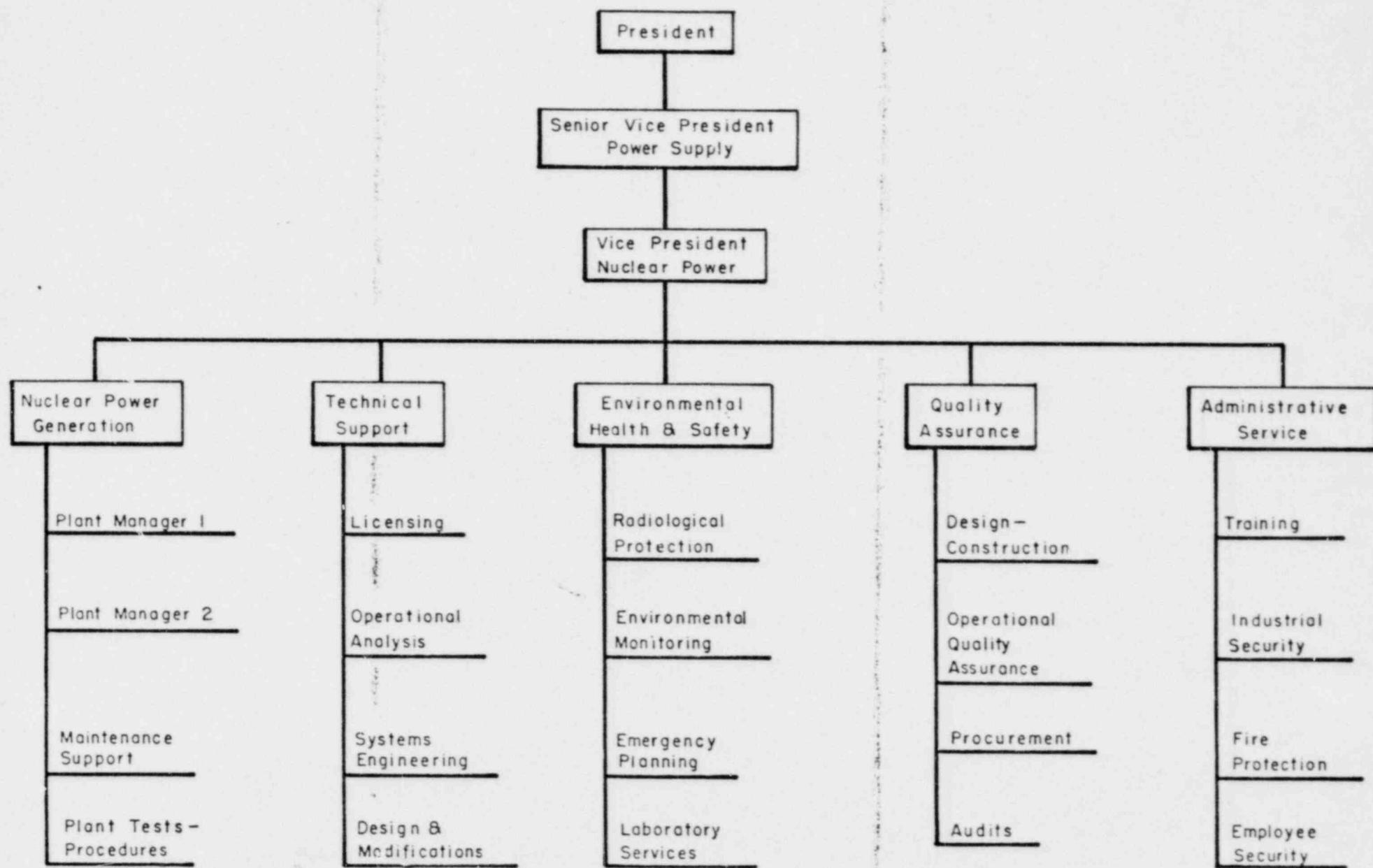
LVM-ACRS  
3/3-4/82

PRINCIPLE INVESTIGATOR ON SEVERAL PROJECTS INCLUDING:

- NSIC-ORNL EVALUATION OF HUMAN RELATED LER'S FOR LWR - SEE-IN SCREENING (NSAC)
- NRC OPERATOR ERROR RATE EVALUATION PROJECT (NRC)
- NRC HUMAN FACTORS IN ACCIDENT INITIATION AND MITIGATION (NRC)
- SANDIA/DOE IMPACTS OF M&T ON LWR SAFETY
- EVALUATION OF CONTROL ROOM DESIGN (GEORGIA POWER)

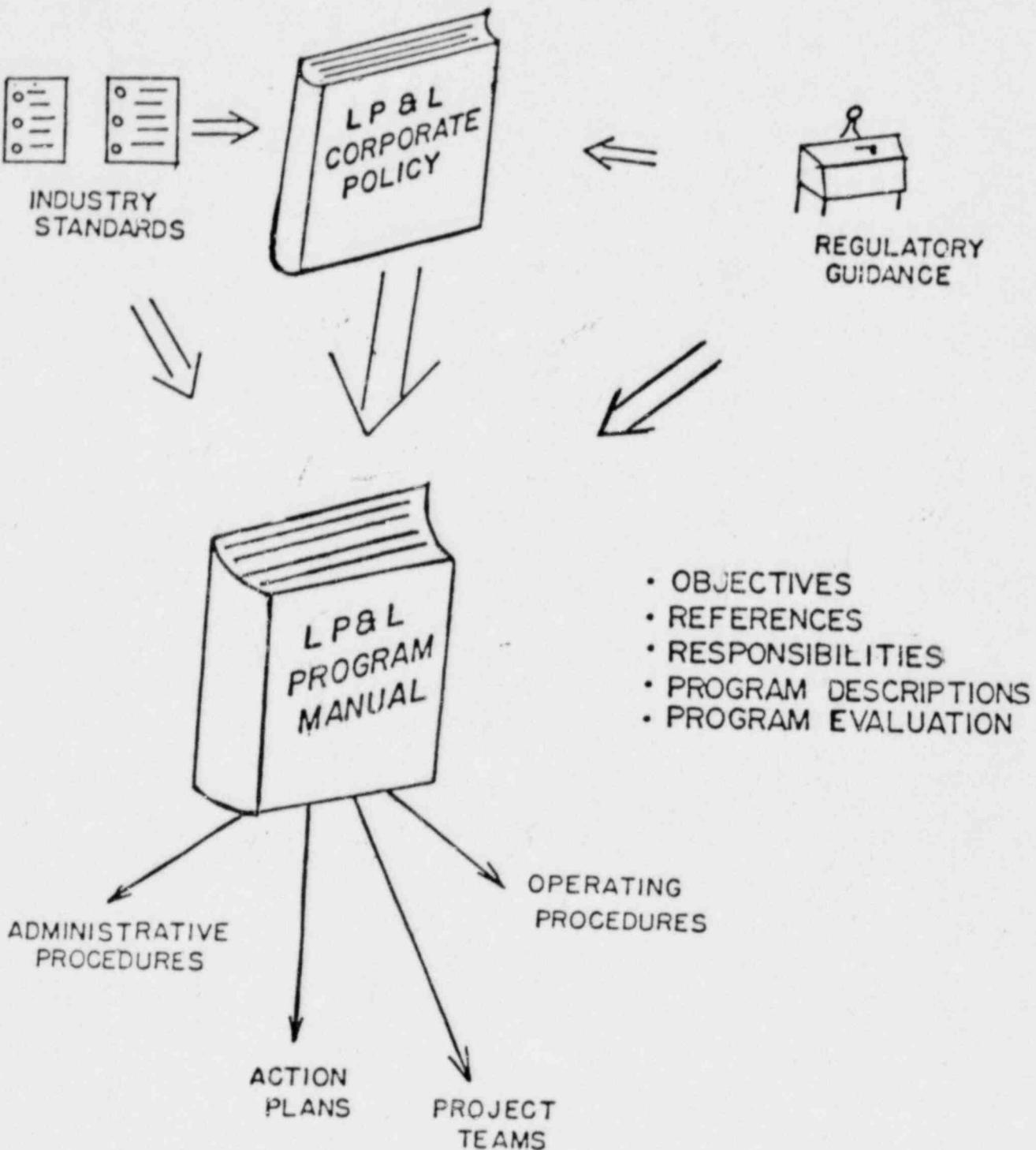
REPRESENTATIVE UTILITY ORGANIZATION

LVM-ACRS  
3/3-4/82



MANAGEMENT CONTROL SYSTEM  
PROCESS

LVM-ACRS  
3/3-4/82



MANAGEMENT CONTROL PROGRAMS

LVM-ACRS  
3/3-4/82

TOTAL NUMBER 129

APPROVED 22

REMAINDER TO BE APPROVED BY APRIL 1, 1982

● TYPICAL PROGRAMS

NUCLEAR OPERATIONS DEPARTMENT POLICY AND ORGANIZATION

SAFETY REVIEW COMMITTEES

INDEPENDENT SAFETY ENGINEERING

STATION MODIFICATION

OPERATION ASSESSMENT

OPERATION ORGANIZATION AND ADMINISTRATION

TRAINING GROUP ORGANIZATION

ENGINEERING TRAINING

SECONDARY CHEMISTRY

MAINTENANCE ORGANIZATION AND ADMINISTRATION

NUCLEAR ENGINEERING SUPPORT TO OPERATIONS

DANGER AND CAUTION TAG CONTROL

WATERFORD 3 NUCLEAR PROJECT

RECRUITING STATISTICS

● NUMBER OF CANDIDATES INTERVIEWED	869
● NUMBER OF JOB OFFERS MADE	304
● NUMBER OF JOB OFFERS ACCEPTED	162

ABOVE FIGURES REFLECT ACTIVITIES FROM NOVEMBER 1,  
1980 THROUGH FEBRUARY 28, 1982.

NUCLEAR OPERATIONS STAFFING

	<u>APPROVED STAFF</u>	<u>PERSONNEL HIRED AS OF 8/6/81</u>
NUCLEAR OPERATIONS STAFF	2	2
PLANT OPERATIONS *	267	174
PROJECT SUPPORT	33	14
QUALITY ASSURANCE	<u>10</u>	<u>8</u>
TOTALS	312	198

\* AS OF 8/6/81, TRAINING AND ADMINISTRATIVE SERVICES  
WERE INCLUDED IN PLANT OPERATIONS.

NUCLEAR OPERATIONS STAFFINGLVM-ACRS  
3/3-4/82

	<u>APPROVED STAFF</u>	<u>PERSONNEL HIRED AS OF 2/28/82</u>	<u>PERCENT STAFFED</u>
<u>NUCLEAR OPERATIONS</u>			
STAFF	2	2	
<u>PLANT OPERATIONS</u>			
STAFF	10	10	
STARTUP	23	12	
MAINTENANCE	76	63	
OPERATIONS	67	65	
TECHNICAL SUPPORT	47	32	
HEALTH PHYSICS	27	14	
QUALITY CONTROL	<u>6</u>	<u>6</u>	
TOTAL	256	204	82%
<u>PROJECT SUPPORT</u>			
STAFF	2	2	
CONSTRUCTION ENRG.	12	7	
OPERATIONAL ENRG.	26	12	
TECHNICAL SERVICES	15	9	
ONSITE SAFETY REVIEW	9	4	
LICENSING	<u>13</u>	<u>6</u>	
TOTAL	77	40	52%
<u>TRAINING</u>			
STAFF	11	6	55%
<u>QUALITY ASSURANCE</u>			
STAFF	21	17	81%
<u>ADMINISTRATIVE SERVICES</u>			
STAFF	<u>59</u>	<u>49</u>	83%
TOTALS	426	316	74%

ACQUISITION OF VITAL PERSONNELLVM-ACRS  
3/3-4/82

<u>PLANT STAFF</u>	<u>COMMITTED</u> <u>4/20/81</u>	<u>Hired As Of</u> <u>2/28/82</u>	<u>Percent</u> <u>Staffed</u>
--------------------	------------------------------------	--------------------------------------	----------------------------------

OPERATIONS SUPT.	1	1	
ASST. PLANT MGR., O & M	1	1	
PLANT ENG. DEPT. SUPV.	1	-	
GENERAL SUPPORT SUPT.	1	-	
NUCLEAR OPERATIONS SUPV.	6	6	
NUCLEAR AUXILIARY OPERATOR (COLD LICENSE)	10	10	
NUCLEAR AUXILIARY OPERATOR (HOT LICENSE)	10	11	
PLANT UTILITY ENG.	3	3	
STA ENGINEERING SUPV.	1	-	
PLANT ASSOC. II/I ENG.	5	5	

OFFSITE SUPPORT

ONSITE SAFETY REVIEW			
ENG. SUPV.	1	1	
ONSITE SAFETY			
REVIEW ENG.	1	-	
OFFSITE TRAINING SUPV.	1	-	
NUCLEAR TRAINING DIR.	1	1	

CONSULTANTS

TECHNICAL ADVISOR TO VICE			
PRES. NUCLEAR OPERATIONS	1	1	
TECHNICAL ADVISOR TO			
PLANT MANAGER	1	1	

TOTALS	45	41	91%
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LVM-ACRS  
3/3-4/82

LP&L TOTAL EXPERIENCE

	<u>TOTAL NUCLEAR</u>	<u>COMMERCIAL NUCLEAR</u>	<u>COMMERCIAL OPERATIONS</u>
PROJECT SUPPORT	199	128	15
NUCLEAR OPERATIONS	1141	632	190
QUALITY ASSURANCE	150	81	4
<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	1490	841	209

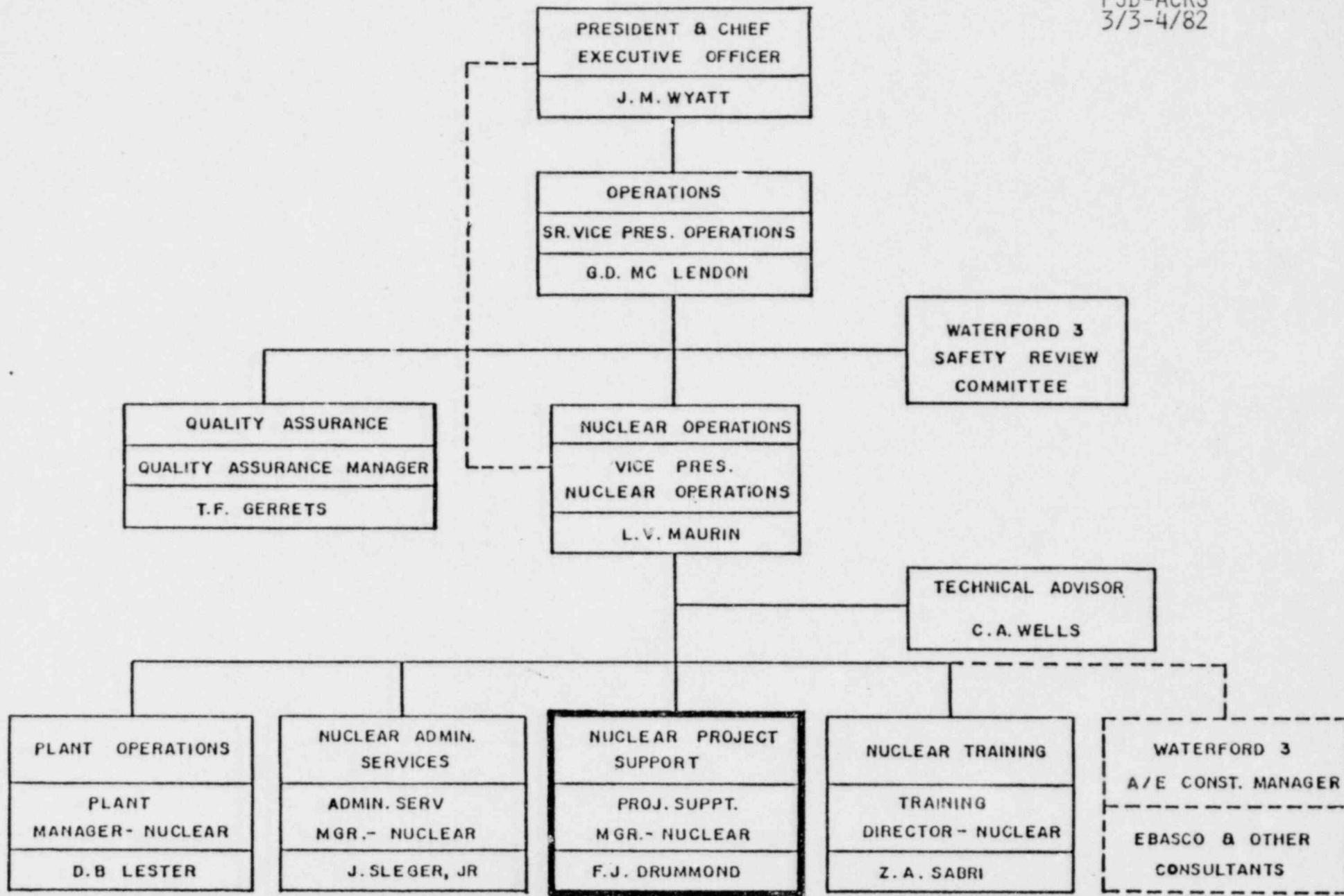
NOTE: ALL THE ABOVE NUMBERS IN MANYEARS

### CONCLUSION

LP&L HAS STRUCTURED AN ORGANIZATION WHICH:

- REALIZES THE MAGNITUDE OF THE PROJECT
- CAPABLE OF MANAGING AND CONTROLLING ALL ASPECTS OF WATERFORD 3 IN A SAFE AND EFFICIENT MANNER INCLUDING:
  - CONSTRUCTION COMPLETION
  - PRE-OPERATIONAL TESTING
  - PLANT START-UP
  - PLANT OPERATION
- EMPHASIZES IMPORTANCE OF TRAINING
- HAS THE REQUISITE EXPERIENCE TO OPERATE WATERFORD 3 SAFELY.
- DEMONSTRATED DURING DEC. 1981 AUDIT "THAT LP&L'S MANAGEMENT CAPABILITIES ARE ADEQUATE TO DIRECT AND SUPPORT SAFE OPERATION OF WATERFORD 3 AND THAT MANAGEMENT IS COMMITTED TO ASSURING SAFE OPERATION OF WATERFORD 3."

FJD-ACRS  
3/3-4/82



----DIRECT COMMUNICATIONS DURING EMERGENCIES

NUCLEAR PROJECT SUPPORT ORGANIZATION

- ORGANIZATION
- FUNCTIONAL RESPONSIBILITIES
- STAFFING
- QUALIFICATIONS AND EXPERIENCE
- SAFETY REVIEW AND AUDIT

NUCLEAR PROJECT SUPPORT ORGANIZATION

TRANSITION

FROM CONSTRUCTION . . . TO OPERATIONS PHASE

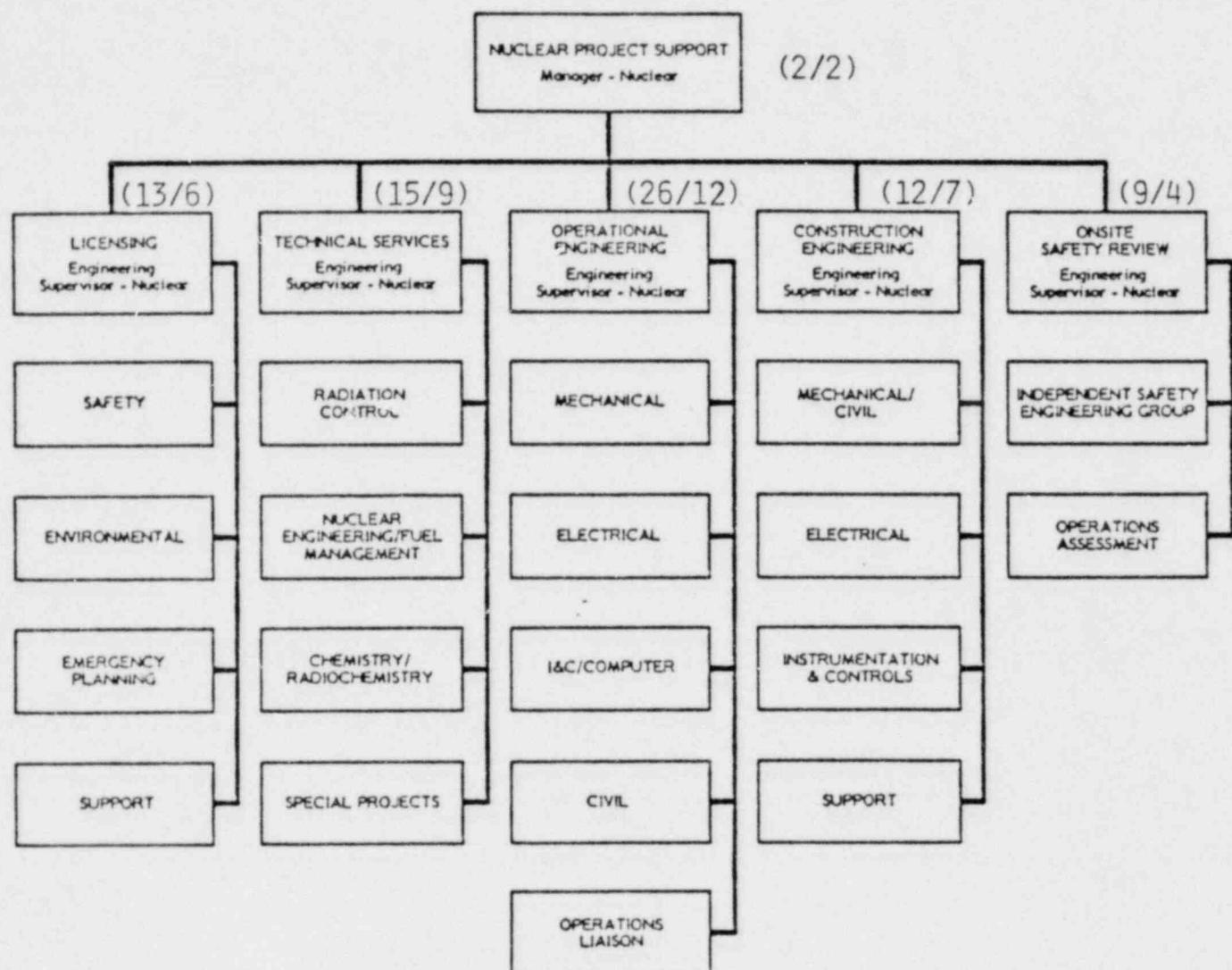
- RETAIN PERSONNEL FROM DESIGN/CONSTRUCTION PHASE
- ALL SUBGROUP SUPERVISORS IN PLACE
- INCREASE EMPHASIS ON OPERATIONAL SUPPORT
- FOCUS ON PLANNING ACTIVITIES

FROM CONSTRUCTION . . . TO LP&L TECHNICAL MANAGEMENT

- INCREASE STAFFING
- MOLD FUNCTIONAL GROUPS
- CONTRACT TEMPORARY EXPERTISE FOR INTERIM WORKLOAD
- TRAINING

FROM CONSTRUCTION . . . TO SUPPORT ORGANIZATION

- EMPHASIZE TECHNICAL EXPERTISE STAFFING
- REDUCE BURDENS OF ADMINISTRATIVE TASKS
- ACCELERATED RECRUITING EFFORTS
- TRAINING
- FOLLOW NUREG - 0731 AND INDUSTRY GUIDANCE



NUCLEAR PROJECT SUPPORT ORGANIZATION

NUCLEAR PROJECT SUPPORT ORGANIZATION

QUALIFICATIONS

39 PROFESSIONALS WITH 51 DEGREES

- 30 ENGINEERING ( 21-BS, 8-MS, 1-PHD )
- 7 PHYSICAL SCIENCES ( 5-BS, 1-BA, 1-PHD )
- 7 BUSINESS OR RELATED ( 4-BS, 1-BA, 1-MBA, 1-AA )
- 2 HEALTH PHYSICS ( 1-MS, 1-AS )
- 5 OTHER
  - BS COMPUTER SCIENCE
  - BS INDUSTRIAL TECHNOLOGY
  - BA AEROSPACE ENGINEERING/ECONOMICS
  - AA DRAFTING
  - AA ELECTRONICS

## NUCLEAR PROJECT SUPPORT ORGANIZATION

EXPERIENCE

	<u>PROFESSIONAL EXPERIENCE (MAN-YEARS)</u>	<u>NUCLEAR POWER PLANT EXPERIENCE (MAN-YEARS)</u>	<u>OTHER NUCLEAR EXPERIENCE (MAN-YEARS)</u>
STAFF	20	11	-
CONSTRUCTION ENGINEERING	107	19	-
OPERATIONAL ENGINEERING	145	38 <sup>(1)</sup>	32
TECHNICAL SERVICES	74	28 <sup>(2)</sup>	17
ONSITE SAFETY REVIEW	34	31 <sup>(3)</sup>	2
LICENSING	65	11	10
	<hr/>	<hr/>	<hr/>
	445	138	61

## NOTES:

- (1) INCLUDES 2 YEARS COMMERCIAL OPERATING NUCLEAR POWER PLANT EXPERIENCE
- (2) INCLUDES 7 YEARS COMMERCIAL OPERATING NUCLEAR POWER PLANT EXPERIENCE
- (3) INCLUDES 6 YEARS COMMERCIAL OPERATING NUCLEAR POWER PLANT EXPERIENCE

## SAFETY REVIEW AND AUDIT PROGRAM

### SAFETY REVIEW COMMITTEE

- REPORTS TO SENIOR VICE PRESIDENT - OPERATIONS
- 12 MEMBERS - POSITIONS FILLED
- 3 OUTSIDE NATIONALLY RECOGNIZED EXPERTS
- ASSESSES POTENTIAL RISKS AT WATERFORD-3
- EXAMINES EFFECTIVENESS OF PORC, ONSITE SAFETY REVIEW AND QUALITY ASSURANCE

### PLANT OPERATIONS REVIEW COMMITTEE

- REPORTS TO PLANT MANAGER
- 8 MEMBERS FROM PLANT STAFF
- ADVISES PLANT MANAGER ON MATTERS RELATED TO NUCLEAR SAFETY

### QUALITY ASSURANCE

- INDEPENDENT REVIEW AND AUDIT OF OPERATION, MAINTENANCE AND TESTING
- REPORTS TO SENIOR VICE PRESIDENT - OPERATIONS

### ONSITE SAFETY REVIEW SUBGROUP

## ONSITE SAFETY REVIEW SUBGROUP

### REPORTING RESPONSIBILITY

- REPORTS TO THE MANAGER, NUCLEAR PROJECT SUPPORT GROUP

### FUNCTIONAL RESPONSIBILITY

- EVALUATE SAFETY-RELATED PROCEDURES FOR TECHNICAL ACCURACY, ADEQUACY AND CLARITY
- REVIEW PLANT OPERATIONS FROM A SAFETY PERSPECTIVE
- EVALUATE QA PROGRAM EFFECTIVENESS
- COMPARE WATERFORD OPERATING EXPERIENCE WITH OTHER PLANTS
- ASSESS PLANT PERFORMANCE REGARDING CONFORMANCE TO SAFETY REQUIREMENTS
- ASSESS PLANT SAFETY PROGRAMS

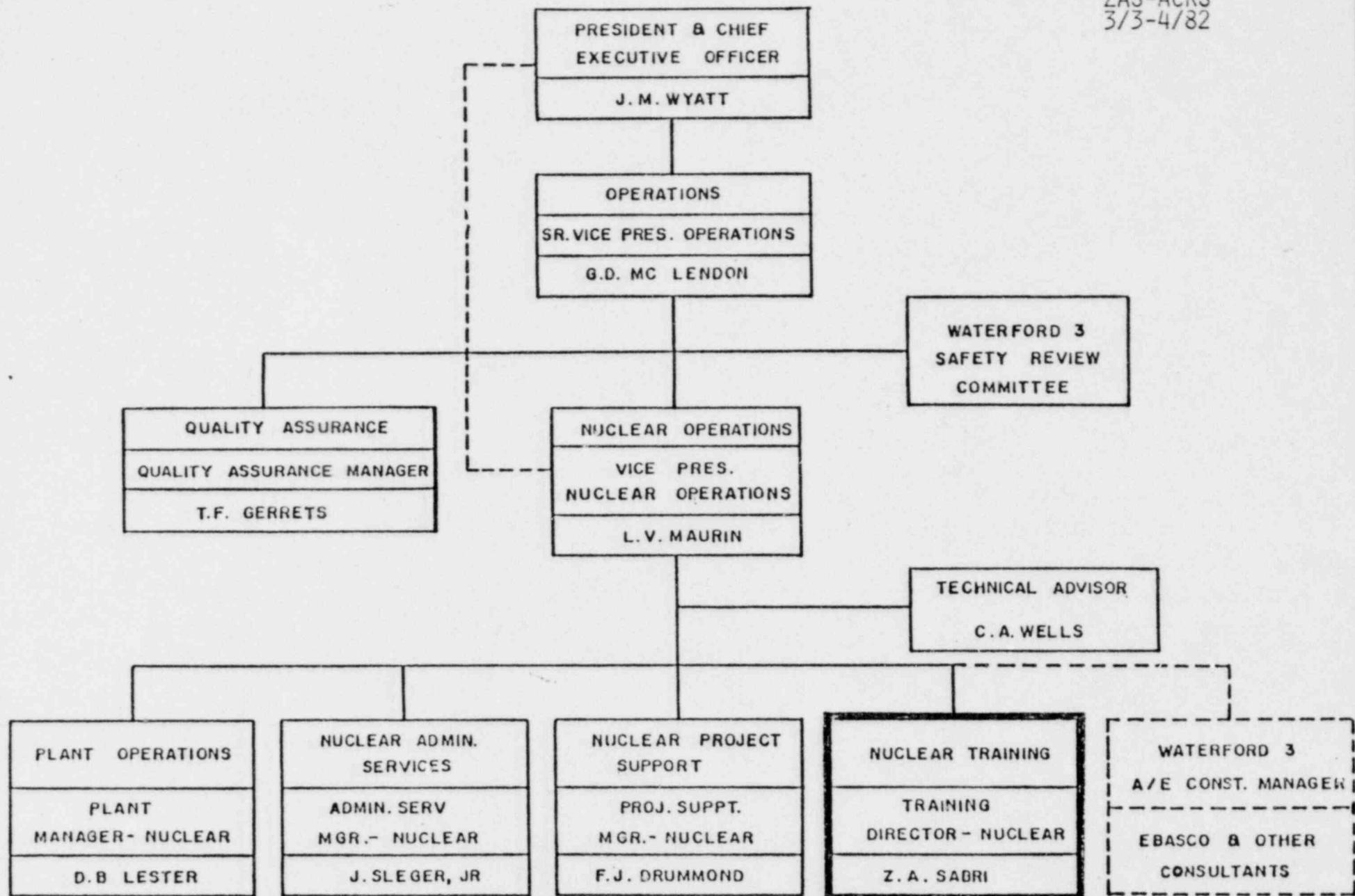
### ORGANIZATION

- INDEPENDENT SAFETY ENGINEERING SECTION
- OPERATIONS ASSESSMENT SECTION

### DISCIPLINES

- ELECTRICAL
- MECHANICAL
- I & C
- NUCLEAR
- RADIATION PROTECTION

ZAS-ACRS  
3/3-4/82



----DIRECT COMMUNICATIONS DURING EMERGENCIES

TRAINING GROUP

- LP&L APPROACH TO TRAINING AND TRAINING PHILOSOPHY
- ORGANIZATION TO IMPLEMENT LP&L TRAINING CONCEPTS
- STATUS OF TRAINING PROGRAMS
  - STAFFING
  - FACILITIES

TRAINING

ZAS-ACRS

3/3-4/82

● MANAGEMENT SUPPORT TO TRAINING

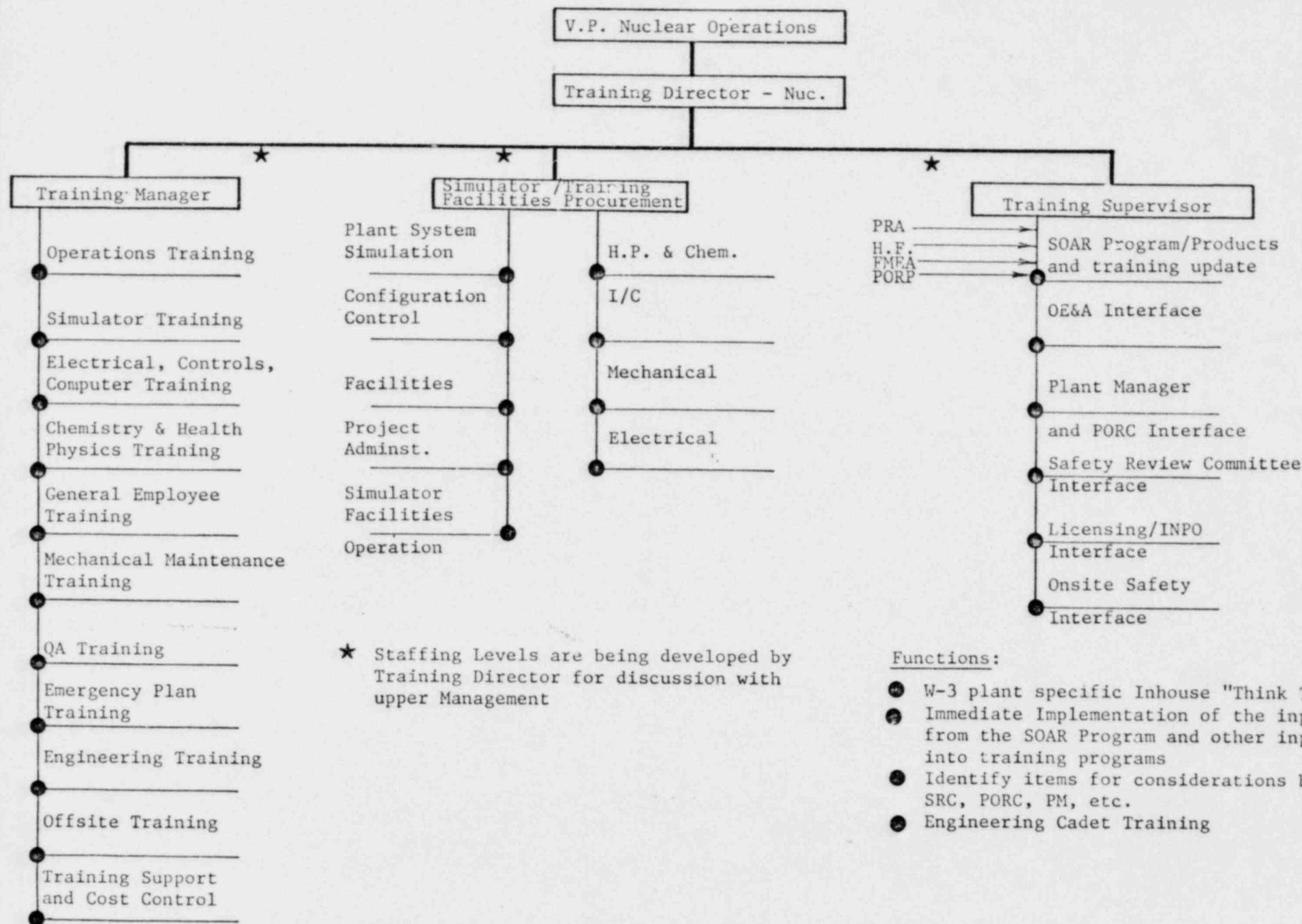
● KEY FEATURES OF THE TRAINING PROGRAMS

- BEST FEATURES OF BS ENGINEERING
- PLANT SPECIFIC
- DEVELOPING MECHANISMS FOR TIMELY UPDATING OF PROGRAMS  
TO REFLECT
  - OPERATION EXPERIENCE (LERS, SEE-IN, ETC.)
  - WATERFORD 3 MODIFICATION
  - PRA - FMEA RESULTS
  - REGULATORY AND INPO GUIDES
  - SAFETY REVIEW COMMITTEE
- CLOSE INTERACTION WITH DIFFERENT DEPARTMENTS
- MEASURING EFFECTIVENESS - MODIFICATIONS
- FLEXIBILITY - VARIATION IN BACKGROUND OF TRAINEE
- ASSURING THAT EVERY INDIVIDUAL HAS A VIVID VISUALIZATION  
AND REALIZATION OF THE CONSEQUENCES OF HIS ACTIONS
- HANDS ON EXPERIENCE AND MAXIMUM INVOLVEMENT OF TRAINEES -  
GENERATION OF THE RIGHT "WHAT IF'S?"

● SIMULATOR TRAINING AND PLANNED TRAINING CENTER

- LOCATION AND SCHEDULING
- CHARACTERISTICS OF THE PLANNED SIMULATOR

● SELECTION AND SCREENING AND CAREER PATHS

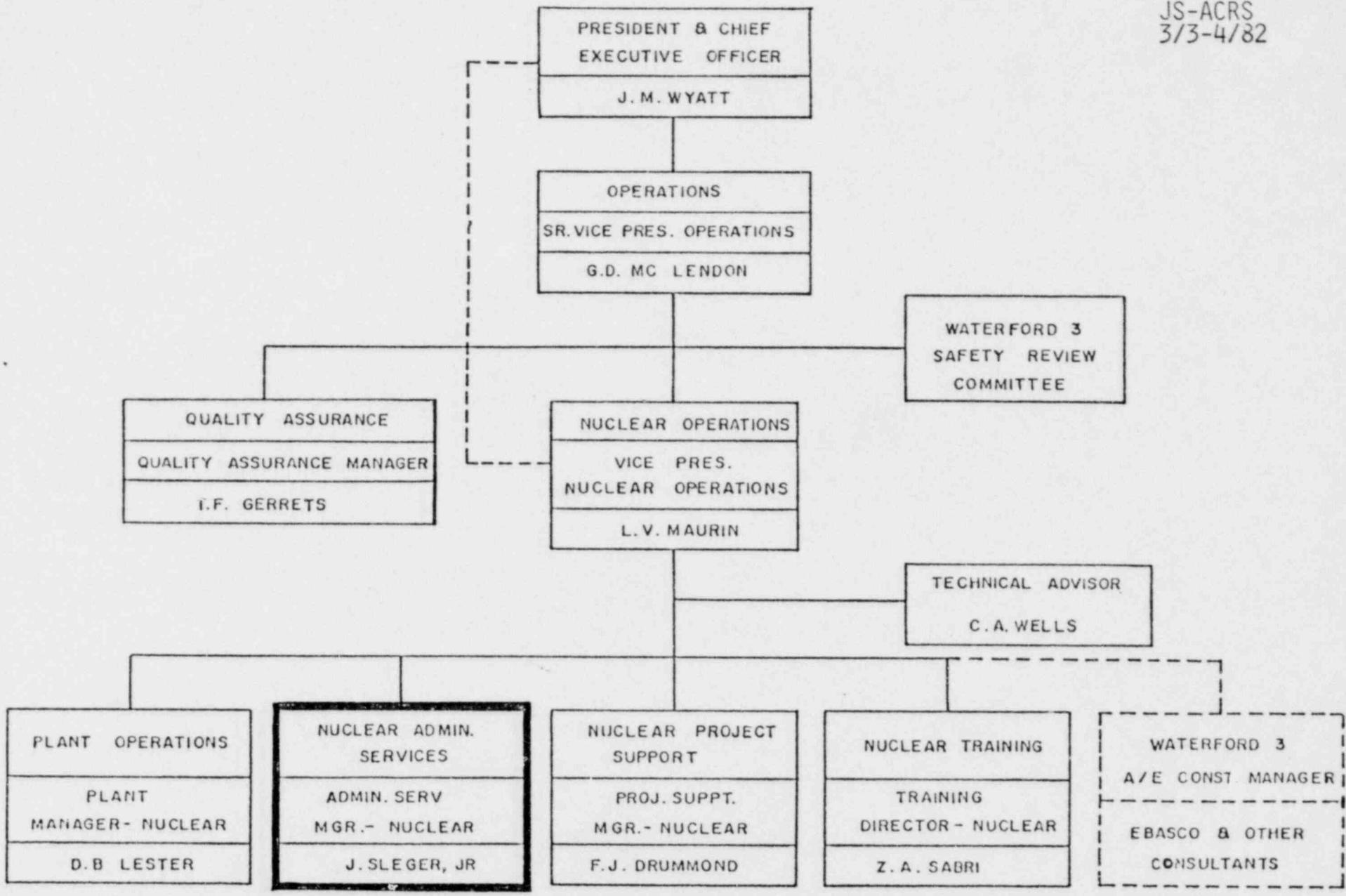


CURRENT TRAINING RESOURCES

	LP&L	CONTRACT	TOTAL NUCLEAR EXPERIENCE	TOTAL COMMERCIAL EXPERIENCE	COMMERCIAL OPERATING EXPERIENCE
MANAGEMENT	1	0	14	5	0
OPERATIONS	3	8	120	82	62
ELECTRICAL	0	3	23	4	1
INSTRUMENT & CONTROLS	1	0	10	2	0
CHEMISTRY	1	0	1	14	0
HEALTH PHYSICS	1	0	4	4	3
GENERAL EMPLOYEE	0	2	23	2	0
MECHANICAL	1	1	64	6	0
ENGINEERING	1	3	21	2	11
TRAINING SUPPORT	1	8	80	44	13
TOTALS	10	25	360	165	90

\*EXPERIENCE IN YEARS

JS-ACRS  
3/3-4/82



NUCLEAR ADMINISTRATIVE SERVICES

- ORGANIZATION
- LOCATION
- COMPARISON WITH PREVIOUS ORGANIZATION
- STAFFING
- RECOGNITION OF SUPPORT ROLE

NUCLEAR ADMINISTRATIVE SERVICES

JS-ACRS  
3/3-4/82

ON-SITE

● GENERAL SUPPORT

- ADMINISTRATIVE SERVICES
  - CLERICAL
  - CENTRAL RECORDS/DOCUMENT CONTROL
  - MATERIAL & STORES
- SECURITY
- SPECIAL SERVICES

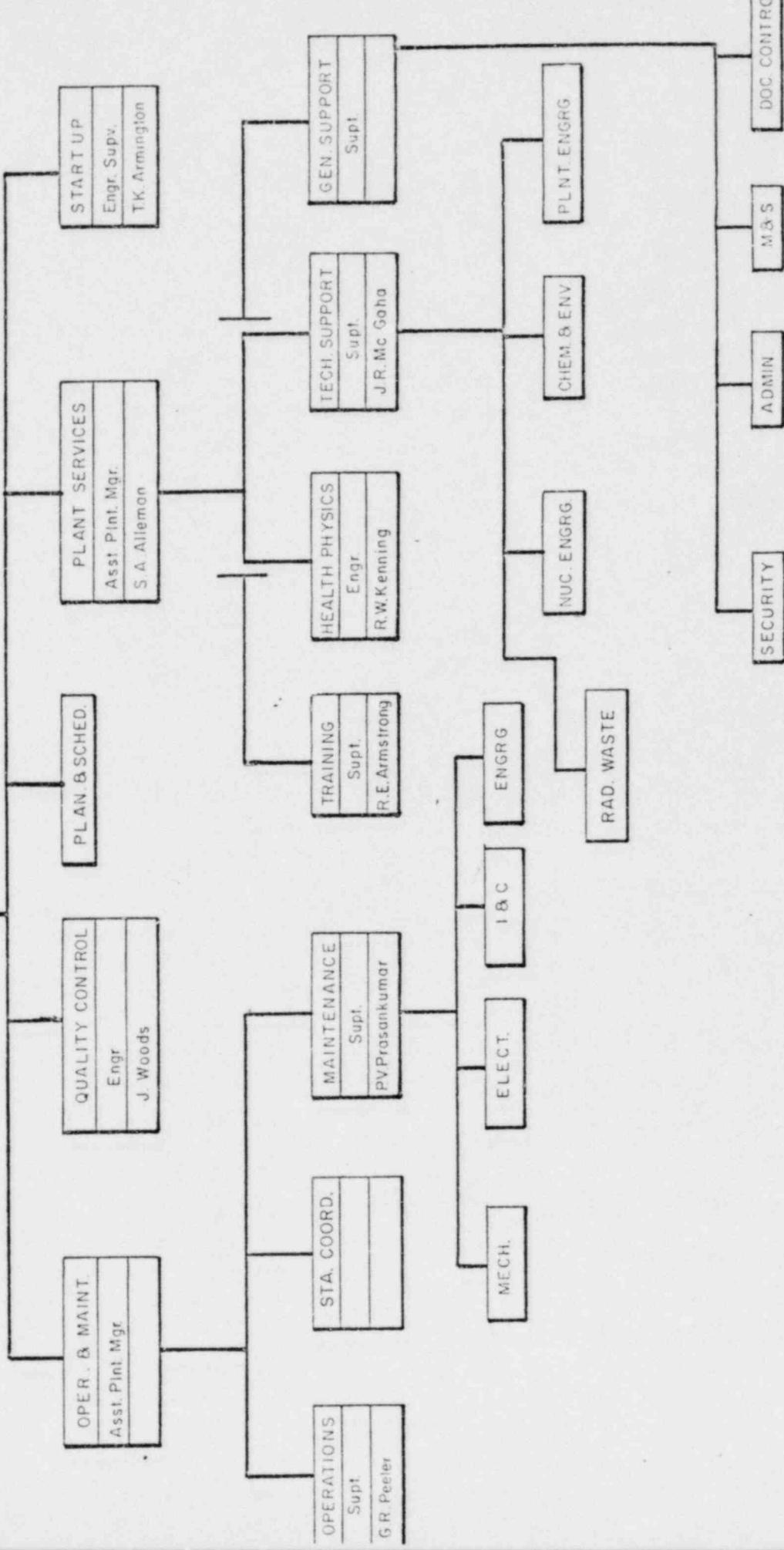
OFF-SITE

- OFFSITE ADMINISTRATIVE SERVICES
- COST CONTROL/CONTRACT ADMINISTRATION
- PLANNING AND SCHEDULING

JS/ACRS  
30-4/82

PLANT MANAGER  
D.B. Lester

TECHNICAL ADVISOR  
P. McGuire



NUC. ADMINISTRATIVE SERVICES  
ADMINISTRATIVE SERVICES  
MANAGER - NUCLEAR  
J. SLEGER, JR.

SECRETARY  
J. TAUZIN

PLANNING & SCHEDULING  
UTILITY ENGINEER-NUCLEAR

OFFSITE ADMIN. SERVICES  
ACCOUNTANT 2  
L.R. GILBERT

GENERAL SUPPORT  
GENERAL SUPPORT SUPT.

COST CONTROL/CONTRACT ADMIN  
UTILITY ENGINEER-NUCLEAR  
K.A. SIMISTER

ENGINEER TECHNICIAN-NUCLEAR  
DRAFTSMAN - "A"

DEPARTMENTAL CLERK  
CLERK A  
J.S. ELOI  
CLERK B/C  
L.B. GATES  
K.L. FRADELLA  
STENO / TYPIST  
D.D. COOKS  
P.J. LORIO  
SITE  
STENO / TYPIST

SECURITY  
SECURITY SUPRV  
R. LAILHEUGUE  
SECURITY SHIFT SUPERVISOR  
J. LEDET  
R. STOHLMAN  
G. ZETSCH  
B. CLARK  
A. HAASE

SECURITY SPECIALIST  
H. WILLIAMS

ADMINISTRATIVE SERVICES  
SENIOR ACCOUNTANT  
C. TARAVELLA

SPECIAL SERVICES  
BUILDING FOREMAN  
C.J. KENNEDY

HELPER / LABORER  
W. DURR  
R.J. MARTIN  
O. QUINN  
M. BOUDREAU  
V. ALEXANDER

ENGR. TECHNICIAN - NUCLEAR  
B. ROSS  
SENIOR ACCOUNTANT  
G.R. CERISE

CLERICAL  
OFFICE SUPERVISOR

MATERIALS & STORES  
NUC. PLANT M&S SUPRV.  
K. RIGGIN

DOCUMENT CONTROL  
OFFICE SUPERVISOR  
C. DURIO

CLERK A  
A. TRENCH  
P. BRINKMAN  
J. AUBERT  
F. GAUTHREAUX  
CLECK B/C  
V. GEIGER  
S. SCOTT  
C. RAMBIN  
C. CARLOS  
STENO / TYPIST  
K. FAVORITE  
L. FRILOUX

MATERIALS OPERATOR A  
S. LOCKETT  
J. HARRELL  
MATERIALS OPERATOR B  
M. BORDELON  
E. ZERINGUE  
CRT OPERATOR B/C  
B. ROBISKIE  
HELPER / LABORER  
P. PIERRE  
K. GAUTIER  
STORES ACCOUNTANT

CLERK A  
L. CAMPBELL  
D. WALTERS  
CLERK B/C  
C. ROSS  
B. MORGAN  
G. COX  
CRT OPERATOR B/C  
J. MULLER

STAFFING

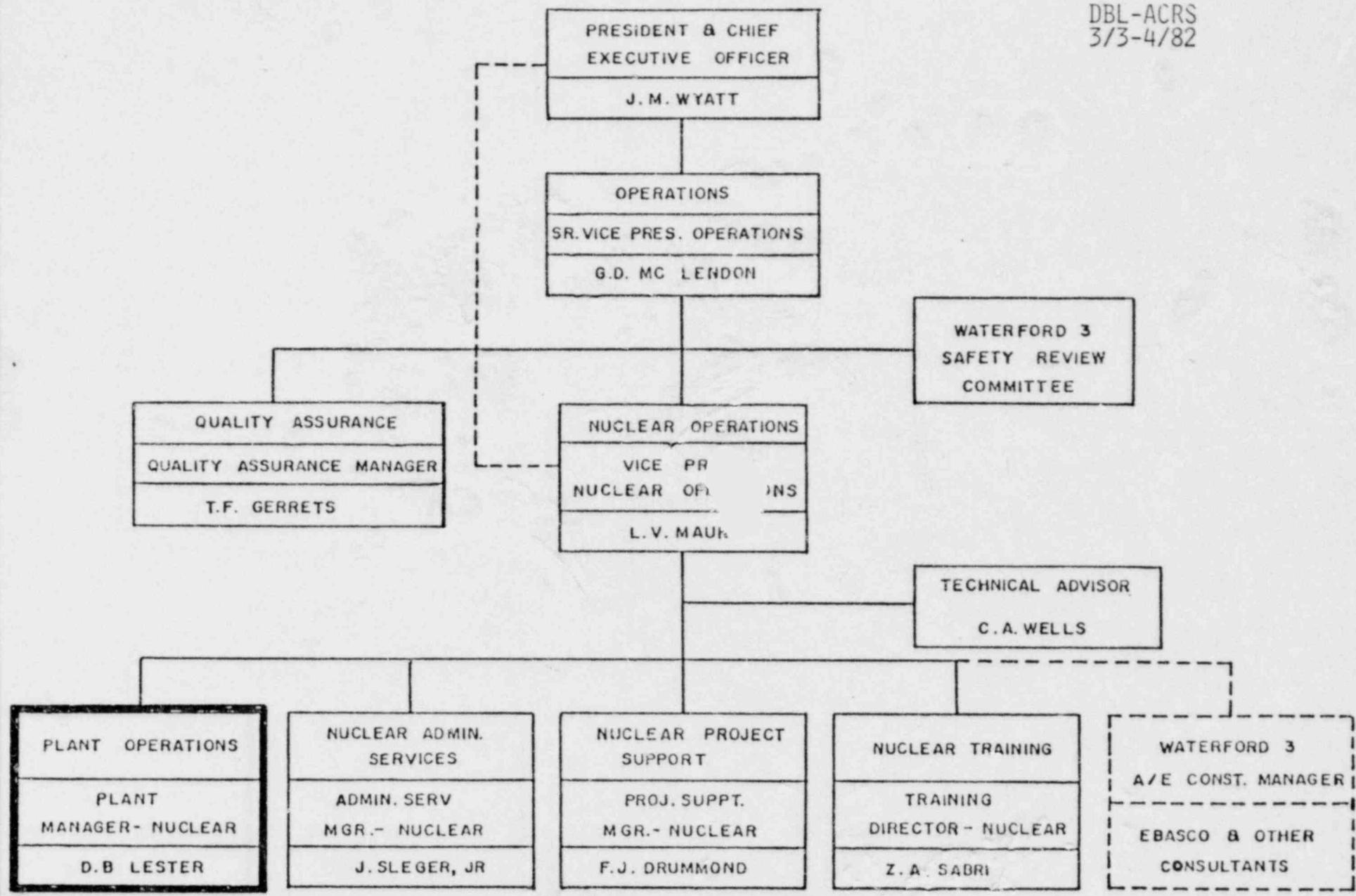
	<u>NUMBER OF PERSONNEL AUTHORIZED</u>	<u>NUMBER OF PERSONNEL HIRED OR ON BOARD</u>	<u>SUPERVISOR OR HIRED ON BOARD</u>
STAFF	2	2	J. SLEGER, JR.
GENERAL SUPPORT	1	0	
SECURITY*	7	7	R.W. LAILHEUCUE
ADMINISTRATIVE SERVICES	29	26	C.P. TARAVELLA
SPECIAL SERVICES	6	6	C.J. KENNEDY
PLANNING & SCHEDULING	3	0	
OFFSITE ADMIN. SERVICES	8	6	L.R. GILBERT
COST CONTROL/ CONTRACT ADMIN.	<u>3</u>	<u>3</u>	K.A. SIMISTER
TOTALS	59	50	

\*A TOTAL OF 89 CONTRACT PERSONNEL WILL BE PROVIDED BY THE WACKENHUT CORP. (TWC) TO SUPPORT THE SECURITY EFFORT AT WATERFORD 3.

NUCLEAR ADMINISTRATIVE SERVICES

- ADMINISTRATIVE AND SUPPORT ACTIVITIES ARE ASSIGNED TO A SINGLE MANAGER
- PERMITS A MORE DIRECT LINE FOR ACCOMPLISHMENT OF ADMINISTRATIVE REQUIREMENTS AND ACTIONS
- RELIEVE TECHNICAL STAFFS OF CERTAIN ADMINISTRATIVE BURDENS
- ENHANCES THE COORDINATION WITH, AND ASSISTANCE TO BE GIVEN TO, OTHER LP&L DEPARTMENTS IN SUPPORTING WATERFORD 3

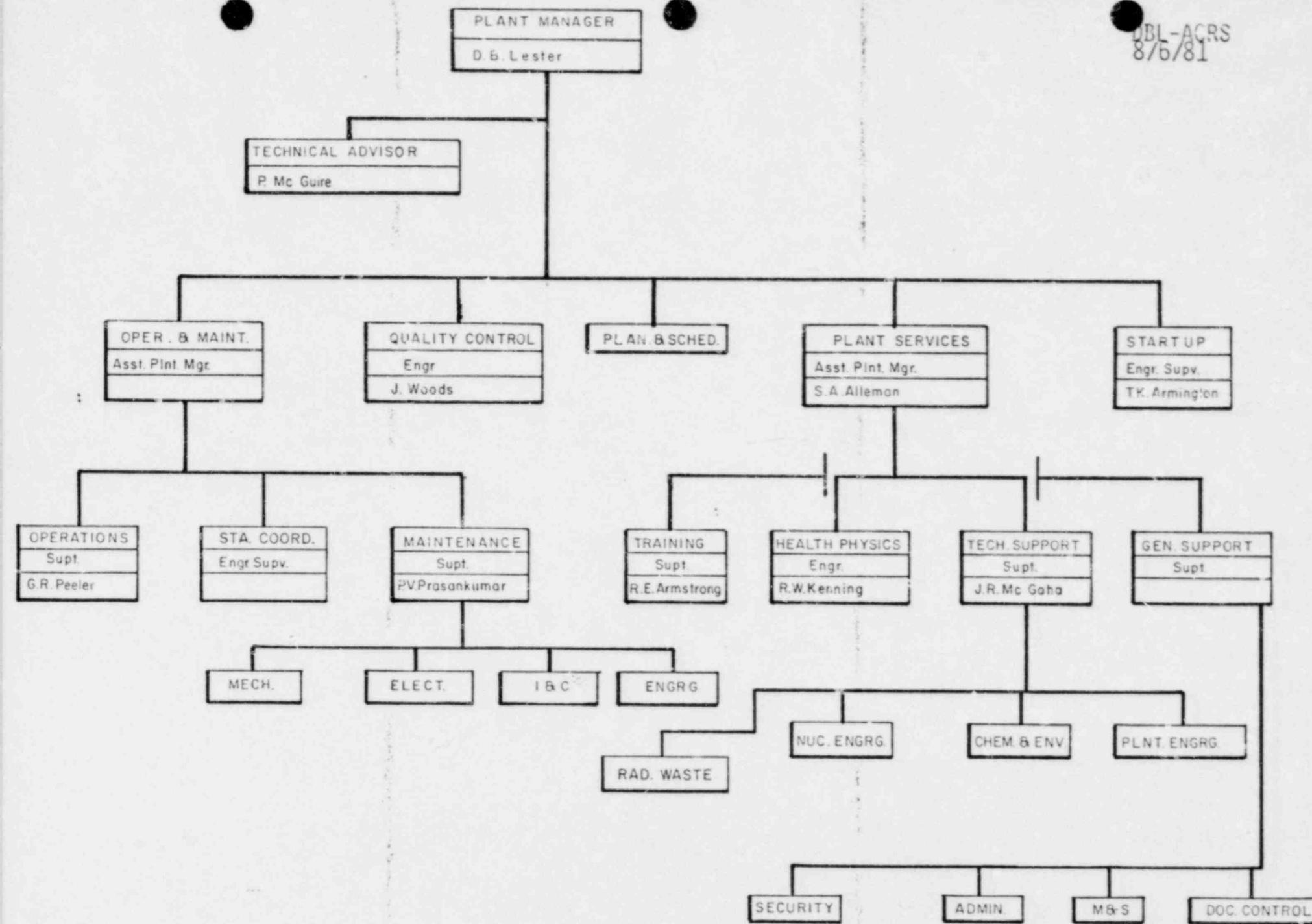
DBL-ACRS  
3/3-4/82



PLANT OPERATIONS

- ORGANIZATION
- EXPERIENCE
- STARTUP/OPERATIONS CONTROL
- CONDUCT OF OPERATIONS

QBL-ACRS  
8/6/81



NUCLEAR OPERATIONS STAFFING

	<u>TOTAL NUCLEAR (MAN-YRS.)</u>	<u>TOTAL COMMERCIAL NUCLEAR (MAN-YRS.)</u>	<u>COMMERCIAL OPERATING NUCLEAR (MAN-YRS.)</u>
<u>PLANT OPERATIONS</u>			
STAFF	41 YRS.	33 YRS.	17 YRS.
STARTUP	102 YRS.	94 YRS.	6 YRS.
MAINTENANCE	246 YRS.	160 YRS.	48 YRS.
OPERATIONS	456 YRS.	172 YRS.	60 YRS.
TECHNICAL SUPPORT	182 YRS.	102 YRS.	28 YRS.
QUALITY CONTROL	18 YRS.	18 YRS.	2 YRS.
HEALTH PHYSICS	96 YRS.	53 YRS.	29 YRS.
<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	1141 YRS.	632 YRS.	190 YRS.

## TOTAL NUCLEAR:

ALL NUCLEAR RELATED EXPERIENCE (I.E. NAVY, CONSTRUCTION,  
OPERATIONS, ETC.)

## TOTAL COMMERCIAL NUCLEAR:

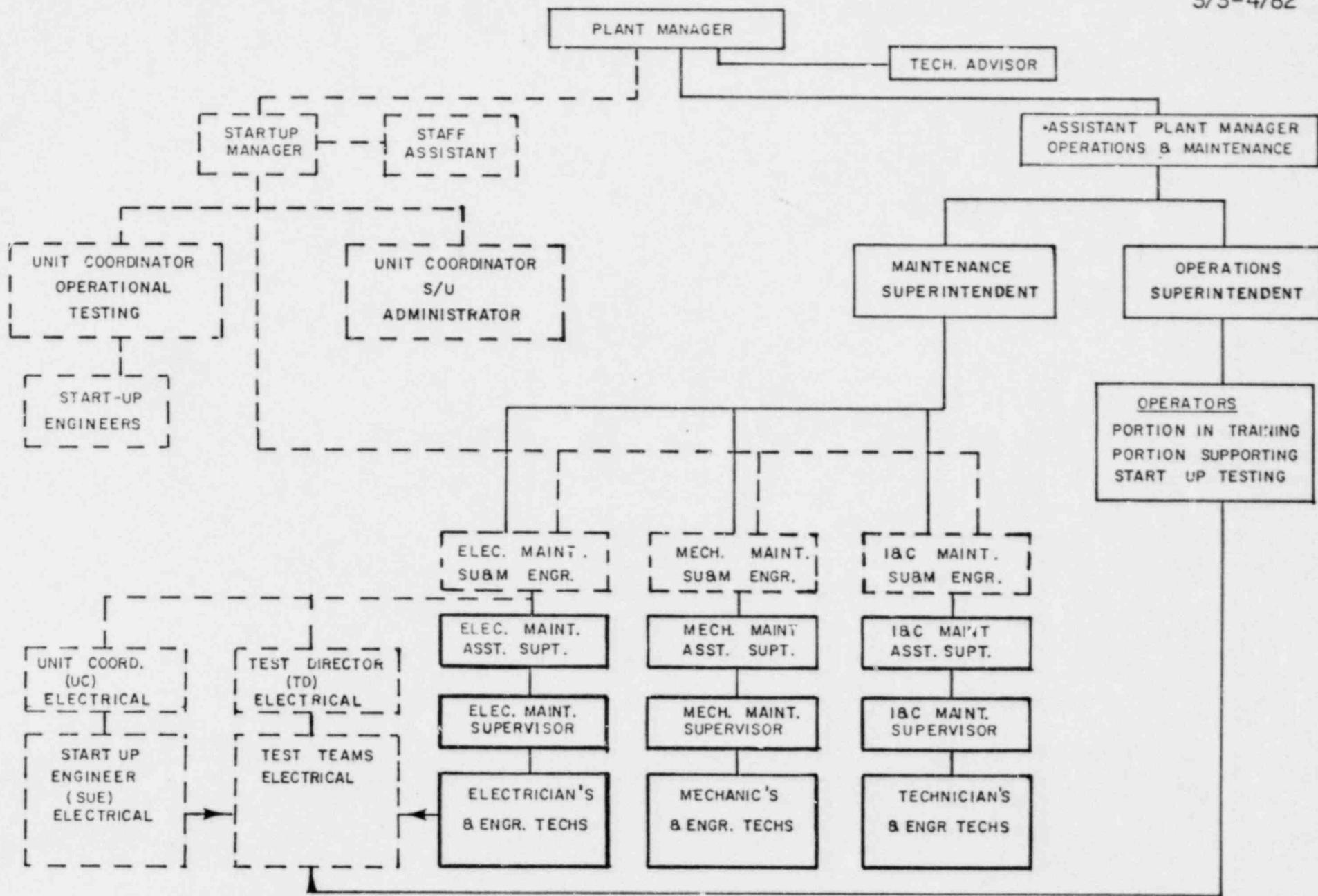
SAME AS ABOVE EXCLUDING NAVY EXPERIENCE

## COMMERCIAL OPERATING:

EXPERIENCE GAINED IN OPERATING PLANTS ONLY.

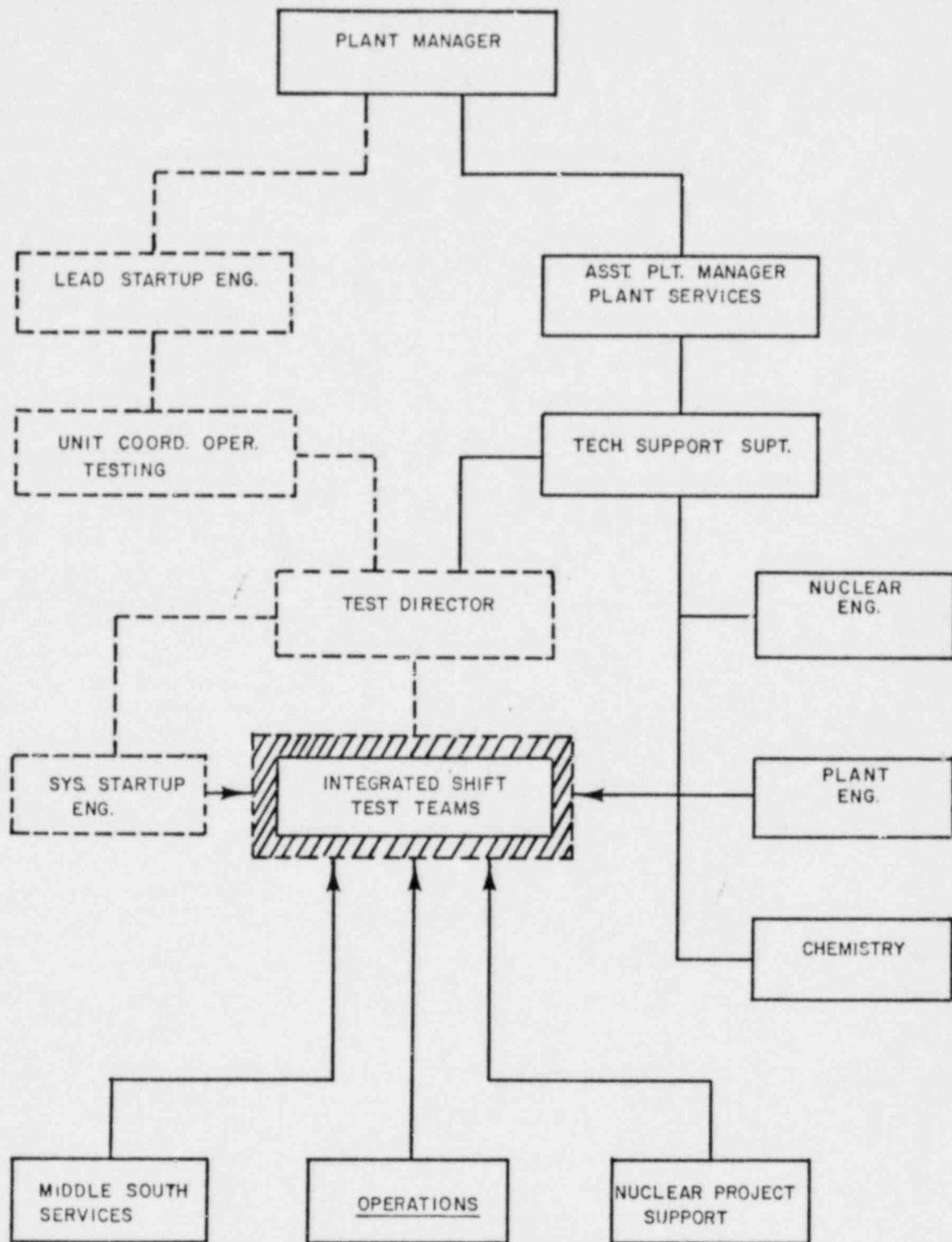
LP&L PREQUISITE & PREOPERATIONAL TEST ORGANIZATION

DBL  
ACRS  
3/3-4/82



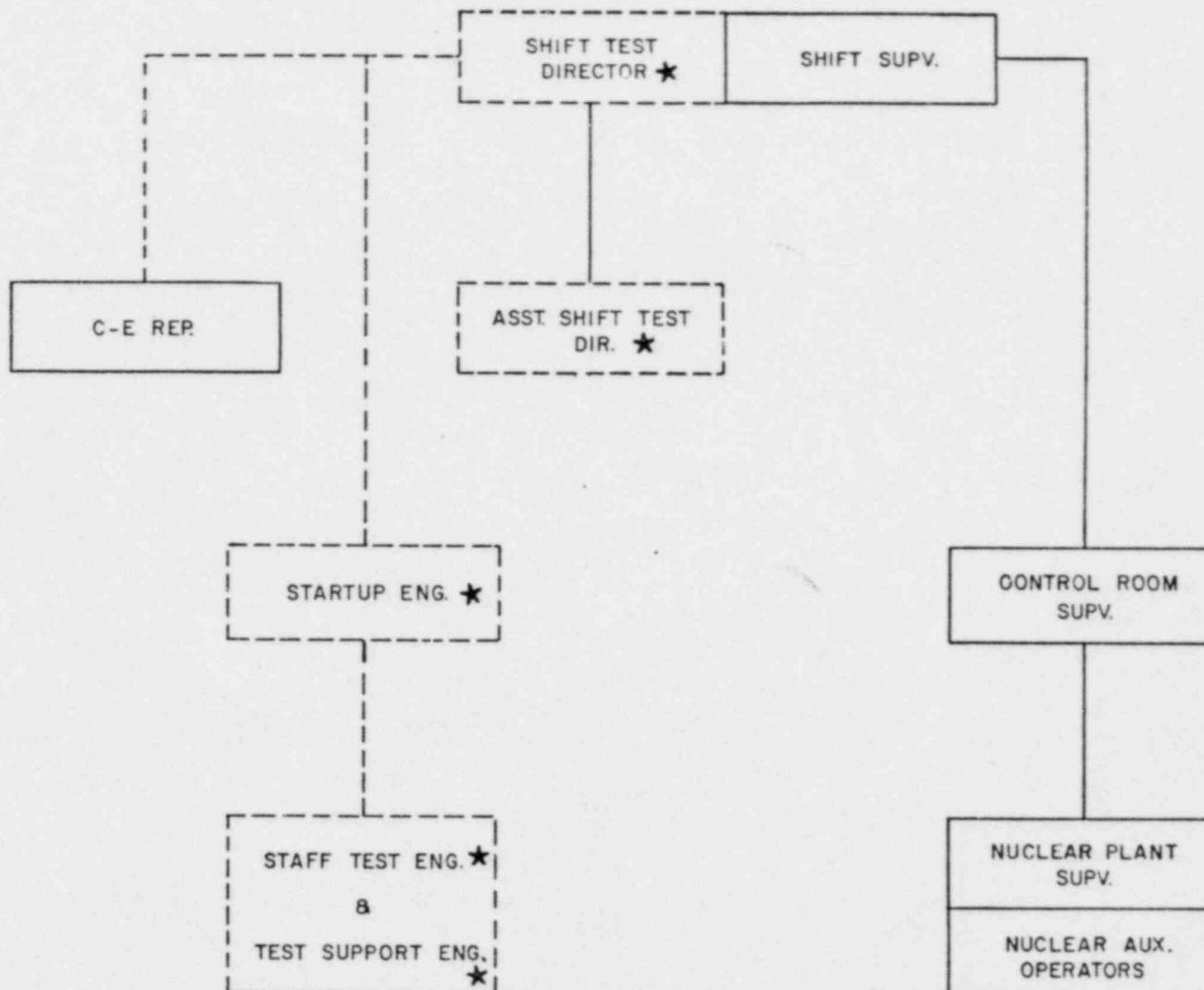
LP&L INTEGRATED TESTING ORGANIZATION

DBL  
ACRS  
3/3, 4/82



SHIFT TEST TEAM  
INTEGRATED TESTS

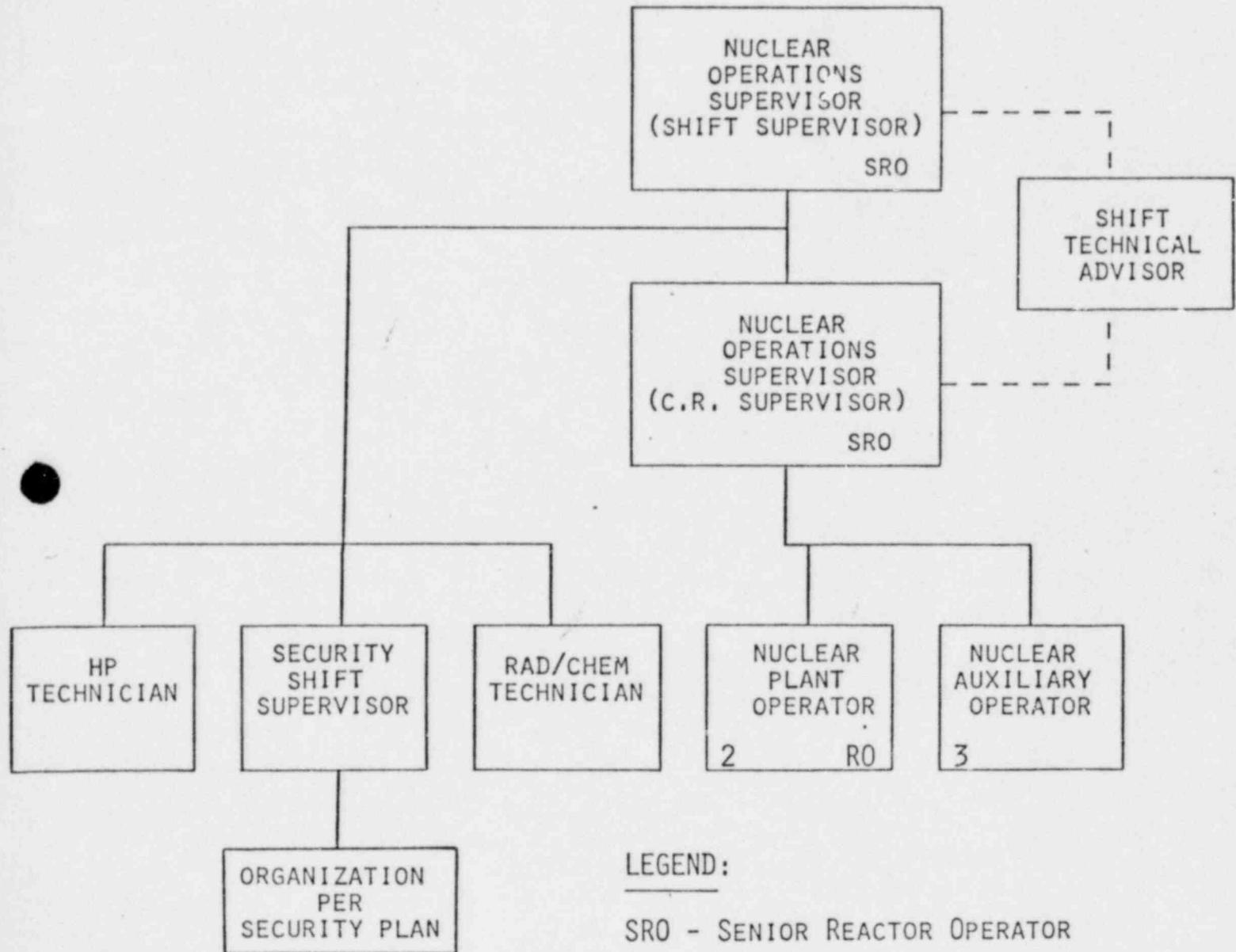
DBL  
ACRS  
3/3, 4/82



★ POSITIONS TO BE HELD BY QUALIFIED PERSONNEL  
FROM THE STARTUP GROUP, PLANT STAFF  
AND SUPPORT STAFF

COMMERCIAL OPERATION SHIFT ORGANIZATION

DBL-ACRS  
3/3-4/82



LEGEND:

SRO - SENIOR REACTOR OPERATOR

RO - REACTOR OPERATOR

CONDUCT OF OPERATIONS

- SHIFT TECHNICAL ADVISORS
- ADMINISTRATIVE DUTIES
- RESTRICTION OF WORKING HOURS
- SHIFT RELIEF
- SHIFT SUPERVISOR RESPONSIBILITY
- CONTROL ROOM ACCESS

SHIFT TECHNICAL ADVISORS

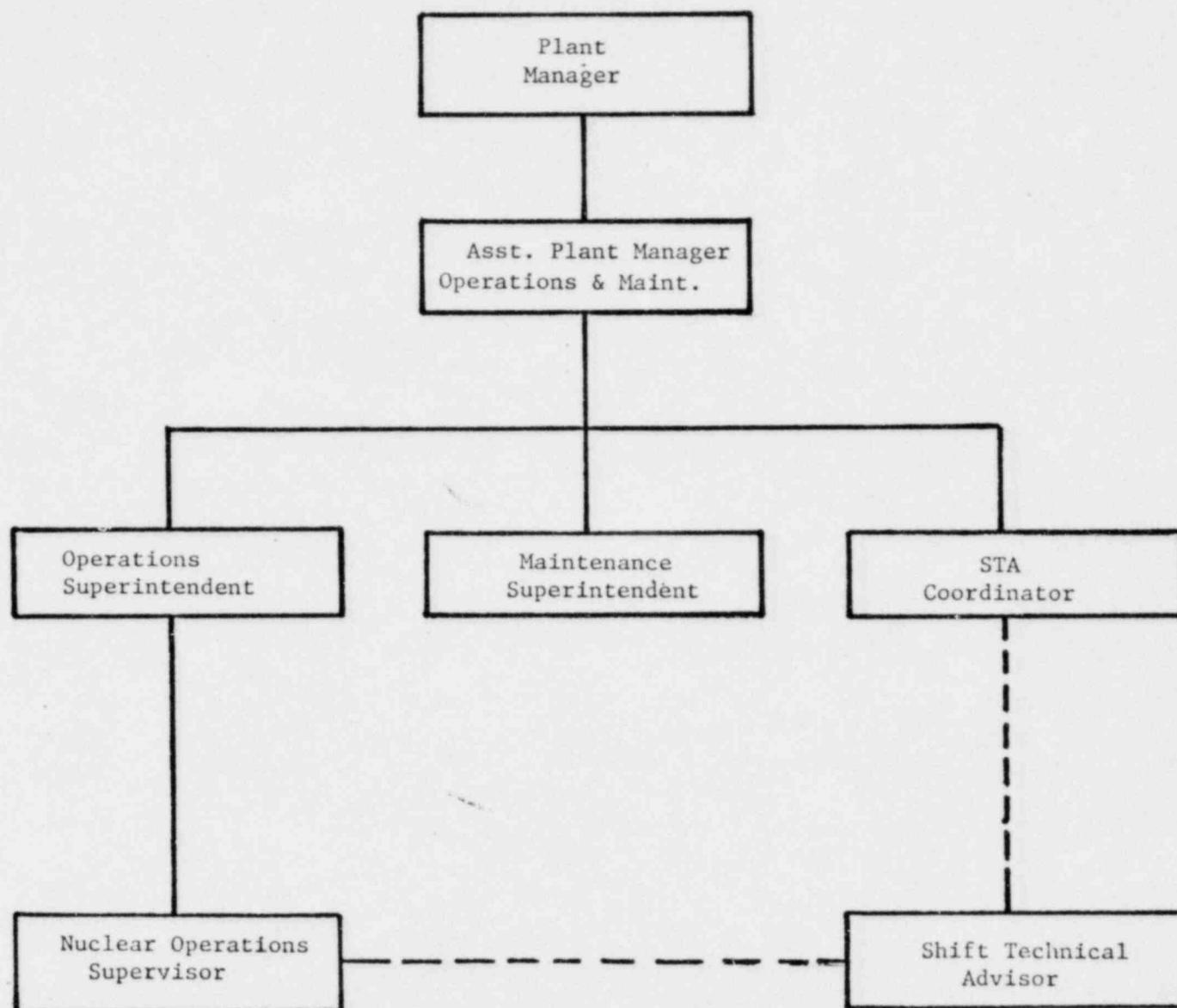
18 SELECTED AND IN TRAINING (OCTOBER 1981)

● 12 PLANT STAFF - 90 MAN/YRS.  
NUCLEAR EXPERIENCE (BS DEGREED)

● 6 OFFSITE SUPPORT - 29 MAN/YRS.  
NUCLEAR EXPERIENCE (BS DEGREED)

COMMUNICATION LINES FOR STA

DBL-ACI  
3/3-4/82

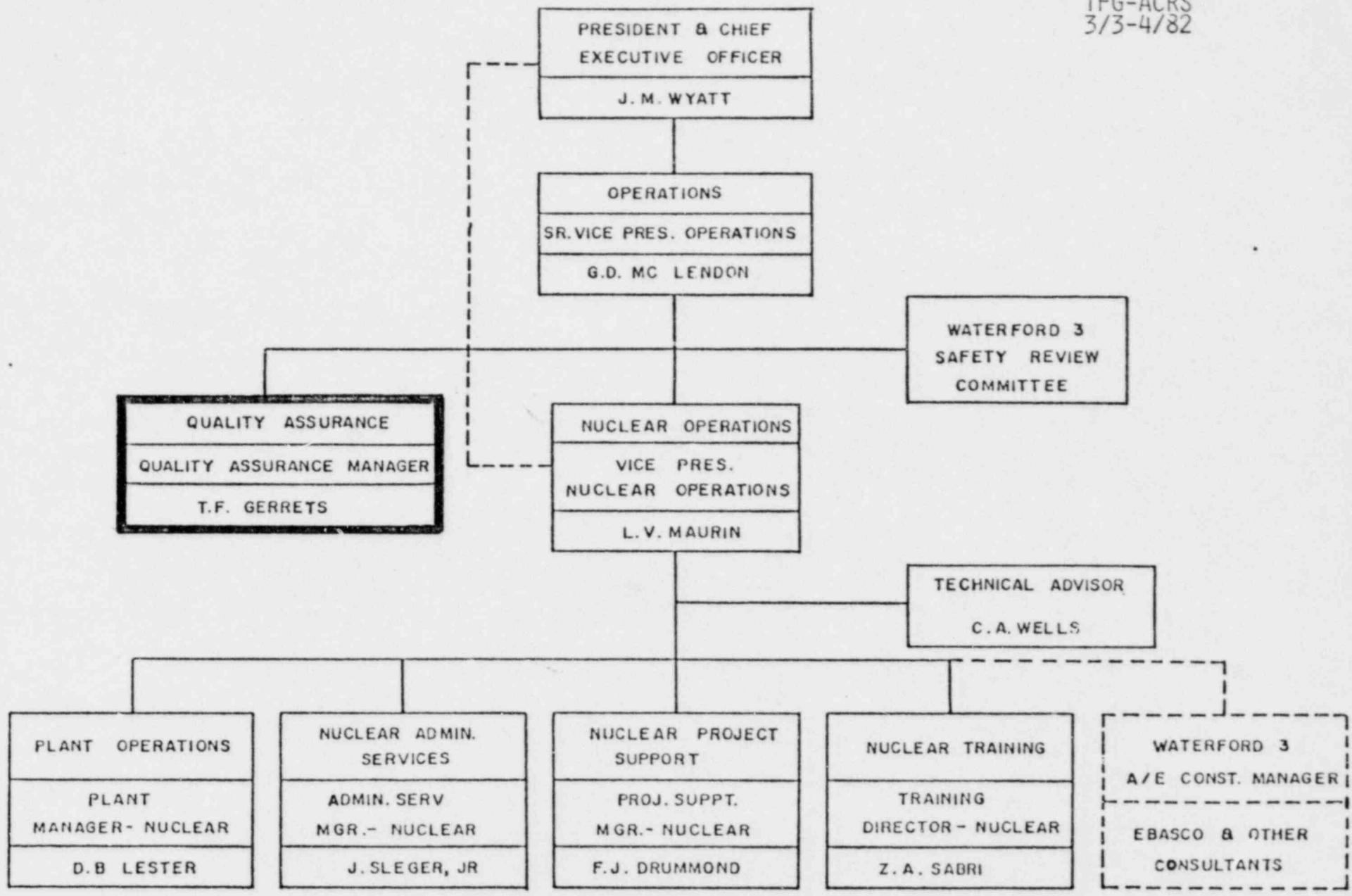


TFG  
ACRS  
3/3-4/82

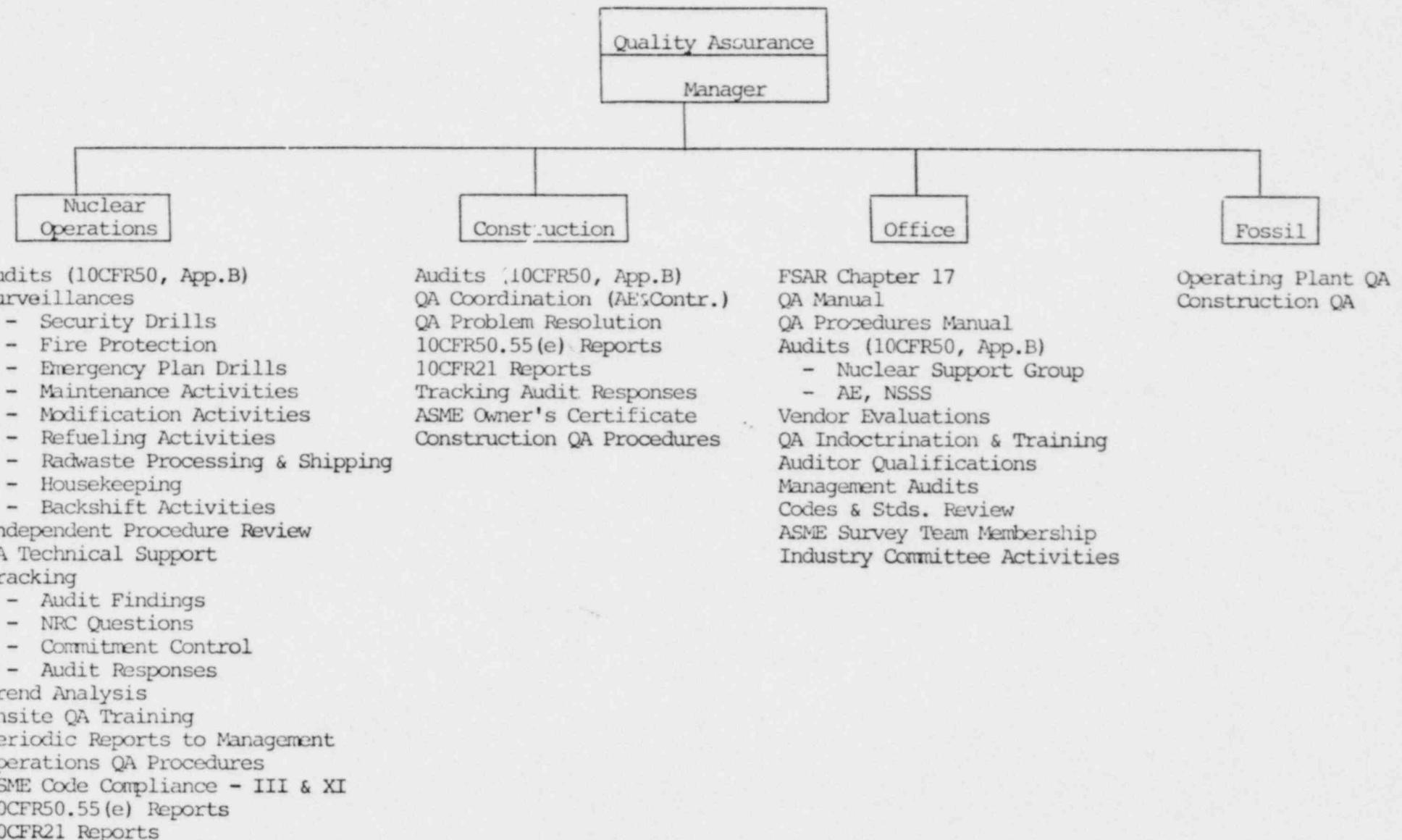
QUALITY ASSURANCE ORGANIZATION

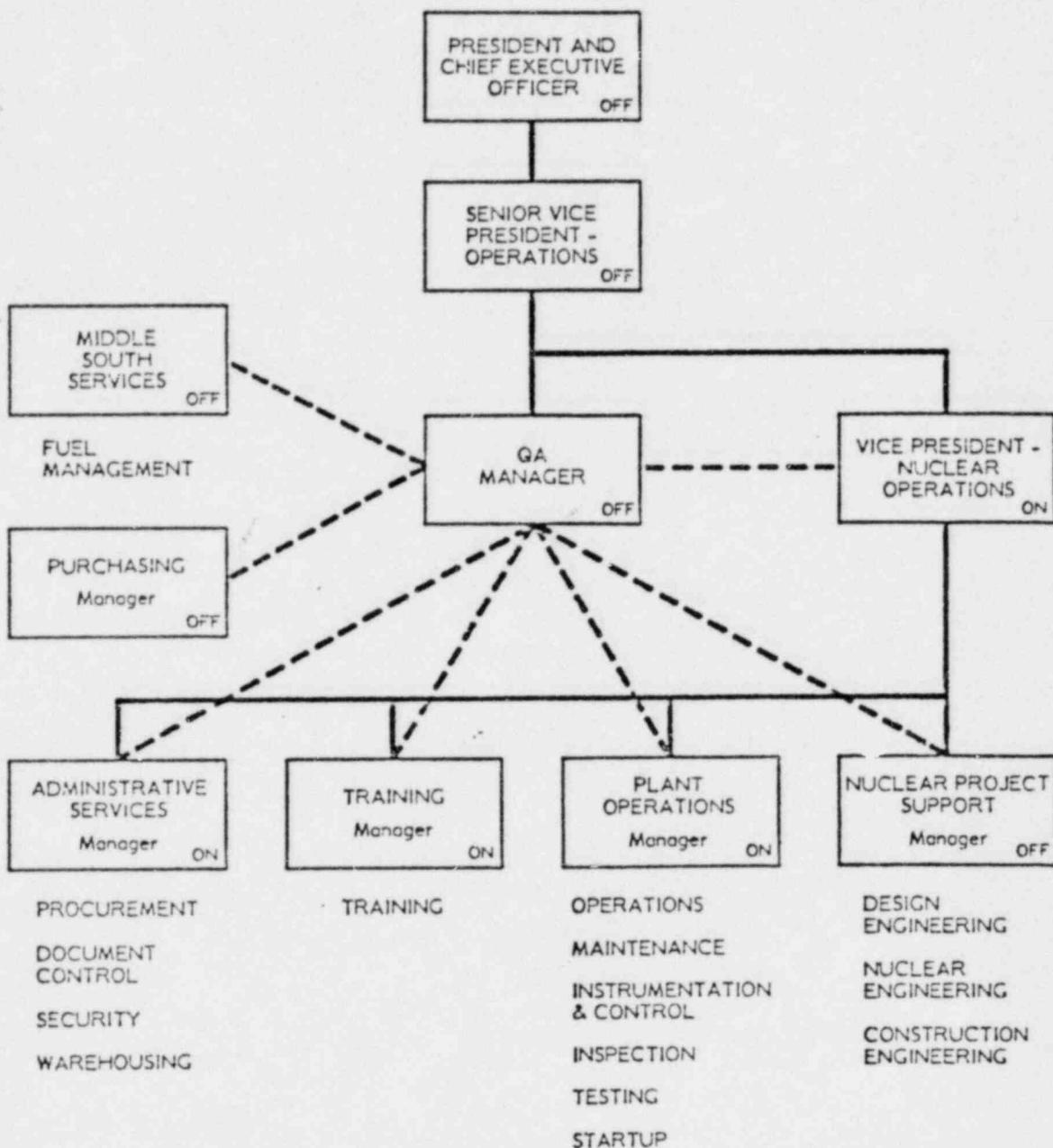
- QA ORGANIZATION AND DUTIES
- INTERFACE ORGANIZATIONS
- STAFFING
- EXPERIENCE

TFG-ACRS  
3/3-4/82



LOUISIANA POWER & LIGHT COMPANY  
QUALITY ASSURANCE ORGANIZATION





ON = ONSITE

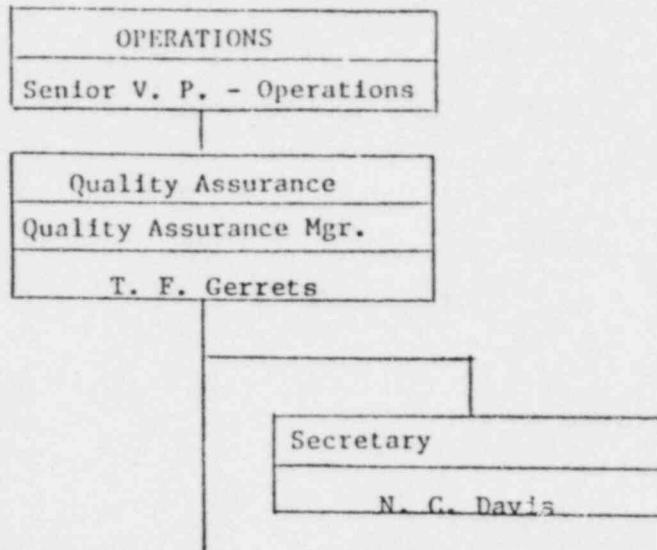
OFF = OFFSITE

— ADMINISTRATIVE  
- - - COMMUNICATIVE

ORGANIZATION AFFECTING QUALITY DURING  
PREOPERATIONAL TESTING AND OPERATIONS

JFG-ACRS  
3/3-4/82

Total LP&L Authorized: 21  
Total LP&L On Board: 15  
Offers Accepted: 2  
Consultants: 1



Nuclear Operations
Engineer - Nuclear
W. M. Morgan

Nuclear Construction
Engineer - Nuclear
L. L. Bass

General Office
Engineer - Nuclear
A. D. Jones

Fossil
Engineer
C. J. Chatelain

Utility Engineer - Nuc.
J. M. Guillot
T. L. Baumgartner
(4-15-82)
Associate Engineer II/I Eng. Tech.-Nuclear
W. J. Baldwin (3-1-82)

Utility Engineer - Nuc.
R. G. Bennett
R. G. Pittman
G. F. Koehler
Associate Engineer II/I Eng. Tech. - Nuclear
B. M. Toups
R. S. Sandridge

Utility Engineer - Nuc.
W. M. Miller
W. F. Axman
Associate Engineer II/I/ Eng. Tech.-Nuclear
M. S. Green
C. J. Savona (3-15-82)

Consultant
R. A. Hartnett

## LP&amp;L PERSONNEL NUCLEAR EXPERIENCE

QA ~~tion~~Month February Year 1982IHG-AUKS  
7/3-4/82

NAME	POSITION	DEGREE (YEAR)	TOTAL NUCLEAR EXPERIENCE	TOTAL COMMERCIAL EXPERIENCE	COMMERCIAL OPERATING EXPERIENCE	INDUSTRIAL EXPERIENCE	QA/QC EXPERIENCE	CERTIFICATIONS
1. Axtman, W. F.	A.E.II-Nuc.	B.B.A/1971	15	0	0	24	13	
2. Baldwin, W. J.	A.E.II-Nuc.	None	18	0	0	18	5	
3. Bass, L. L.	Eng.-Nuc.	B.S.I.E./1963	8	8	0	20	6	
4. Bennett, R. G.	A.E.II-Nuc.	None	2	2	0	20	2	
5. Chatelain, C. J.	Engineer	B.S. Voc.Ag./1953	3	3	0	26	3	
6. Gerrets, T. F.	QA Manager	B.S.M.E./1967	10	10	0	14	10	PE-Mech,Qual.
7. Guillot J. M.	A.E.II-Nuc.	None	20	8	1	21	12	PE
8. Green, M. S.	A.E.II-Nuc.	None	4	4	0	20	7	ANI,AWS-CWI
9. Jones, A. D.	QA Eng.-Nuc.	B.S.E.E./1950	4	4	0	30	4	
10. Koehler, G. F.	A.E.II-Nuc.	None	0	0	0	15	0	
11. Miller, W. M.	A.E.II-Nuc.	B.S-Food Sci./1952	1	1	0	20	19	ASQC-CQE
12. Morgan, W. M.	U.E.-Nuc.	None	25	8	3	30	10	
13. Pittman, R. G.	A.E.II-Nuc.	BS.Ind.Mgt.Tech./1974	2	2	0	7	2	
14. Sandridge, R. S.	Eng.Tech-Nuc.	None	5	5	0	16	12	ASQC-CMI,AWS-CWI
15. Savona, C. J.	A.E.II-Nuc.	A.S.-I.E.,A.B.-G.B. BA-Management	0	0	0	20	8	ASQC-CQE
16. Toups, B. M.	Eng.Tech-Nuc.	None	9	9	0	11	9	
17. Hartnett, R. A.	Consultant	B.S.E.E./1970	10	10	0	20	9	PE-Elec.,Qual.
18. Baumgartner, T.	U.E.-Nuc.	None	14	7	0	14	7	
TOTALS		BS/BA Degrees 9	150	81	4	346	138	

LOUISIANA POWER & LIGHT COMPANY  
QUALITY ASSURANCE ORGANIZATION

SUMMARY

● FUNCTIONAL ORGANIZATIONAL STRUCTURE

- INDEPENDENCE
- AUTHORITY

● EXCELLENT WORKING RELATIONSHIP

- NUCLEAR OPERATIONS
- OTHER LP&L DEPARTMENTS

● EXPERIENCE

- 20 YRS/PERSON OVERALL
- 8 YRS/PERSON QA

ACRS QUESTIONS BASED ON  
LP&L'S RESPONSE TO ACTION  
ITEM II.F.2 OF NUREG 0737

● HOW LP&L

- SELECTED RVLMS
- PLANS TO USE RVLMS
- PLANS TO INCORPORATE RVLMS INTO  
EMERGENCY OPERATING PROCEDURES

● ABBREVIATIONS

- CEGO - COMBUSTION ENGINEERING  
OWNER'S GROUP
- HJTC - HEATED JUNCTION THERMOCOUPLE
- RVL M - REACTOR VESSEL LEVEL MONITOR
- FA PLATE - FUEL ALIGNMENT PLATE
- ICC - INADEQUATE CORE COOLING

LP&L SELECTION PROCESS FOR RVLMS  
(SURVEYED 3 VIABLE SYSTEMS IN EARLY 1981)

<u>SYSTEM</u>	<u>EVALUATION</u>	<u>RESULT</u>
EX-VESSEL	DISCUSSED WITH UTILITY INVOLVED IN TESTING SYSTEM	REJECTED
NEUTRON DETECTOR (NNC)	(REVIEW OF AVAILABLE LITERATURE AND ORNL PRESENTATION TO NRC ON 2/17/82)	
ΔP SYSTEM (WESTINGHOUSE)	WSES-3 REACTOR VESSEL HAS NO BOTTOM HEAD PENETRATIONS VENDOR INDICATED SYSTEM WAS NOT FEASIBLE AT WSES-3	REJECTED
HJTC (CE)	CE EVALUATED 8 OTHER SYSTEMS AND RECOMMENDED HJTC LP&L AS A MEMBER OF CEOG IS FUNDING AND PARTICIPATING IN DEVELOPMENT WORK	ACCEPTED

LP&L PLANS FOR USING RVLMS

- CORROBORATION OF INFORMATION OBTAINED FROM OTHER INSTRUMENTS
- AS OPERATORS DEVELOP EXPERIENCE AND FAMILIARITY (CONFIDENCE) WITH THE SYSTEM ADAPTING FOR OTHER APPLICATIONS POSSIBLE.
- NOT IDENTIFIED FOR ANY SPECIFIC USE OTHER THAN " INDICATE WATER LEVEL ABOVE TOP OF FA PLATE AND AID IN THE DETECTION OF APPROACH TO AND RECOVERY FROM ICC"

LP&L PLANS TO INCORPORATE RVLMS  
INTO  
EMERGENCY OPERATING PROCEDURES

- ➊ WORKING AS CEOG MEMBER WITH CE IN THE DEVELOPMENT OF  
GENERIC OPERATING GUIDELINES
  
- ➋ WILL EVALUATE GENERIC EMERGENCY OPERATING GUIDELINES  
FOR SPECIFIC APPLICATIONS TO WSES-3 EMERGENCY  
OPERATING PROCEDURES

CONCLUSIONS

- CONTRACTED CE TO MODIFY R. V. HEAD
- PLACED ORDERS FOR HJTC SYSTEM WITH CE
- WORKING AS CEOG MEMBER WITH CE IN EMERGENCY  
PROCEDURE GUIDELINES
- WILL INSTALL HJTC SYSTEM UPON ASSURANCE OF  
OPERABILITY AT WSES-3
- WILL KEEP ABREAST OF DEVELOPMENTS AT NRC AND  
AT NRC MEETINGS WITH ACRS AND COMMISSIONERS

SUMMARY

- APPRECIATION FOR OPPORTUNITY TO DISCUSS CURRENT LP&L CORPORATE AND WATERFORD-3 PLANT STRUCTURES.
- WE FEEL LP&L HAS SIGNIFICANTLY STRENGTHENED THEIR NUCLEAR ORGANIZATION BY
  - NUCLEAR OPERATION DEPARTMENT FORMATION
  - VICE PRESIDENT - NUCLEAR OPERATION DEPARTMENT IS LOCATED ON SITE TO GIVE CORPORATE DIRECTION AND TIMELY DECISION MAKING
  - PUTTING TOGETHER AN INTEGRATED LP&L AND CONTRACT TEAM WITH REQUISITE EXPERIENCE TO TEST AND START-UP WATERFORD-3
  - SIGNIFICANT INCREASE IN NUCLEAR EXPERIENCE WITHIN LP&L ORGANIZATION
  - AGGRESSIVE RECRUITING PROGRAM SUCCESSFUL IN HIRING QUALITY PERSONNEL
  - OBTAINED HIGHLY QUALIFIED PROFESSIONAL TO DIRECT LP&L TRAINING PROGRAM
  - INVOLVEMENT BY LP&L MANAGEMENT TO ENSURE AN APPRECIATION FOR THE MAGNITUDE OF WATERFORD-3
  - ADDITION OF RECOGNIZED EXPERTS TO THE SAFETY REVIEW COMMITTEE

WE ARE DEDICATED TO SAFELY MANAGE AND OPERATE WATERFORD-3 AND WILL CONTINUE TO EVALUATE THE NEEDS OF OUR ORGANIZATION SUCH THAT AN IN-DEPTH TEAM OF QUALIFIED PERSONS ARE MAINTAINED AT LP&L.