

UNITED STATES OF AMERICA

BEFORE THE
NUCLEAR REGULATORY COMMISSION

In the Matter of:)	
)	
HOUSTON LIGHTING & POWER)	Docket No. 50-498 OL
COMPANY, ET AL)	50-499 OL
)	
South Texas Nuclear Project)	
Units 1 and 2)	

Green Auditorium
South Texas College of Law
1303 San Jacinto Street
Houston, Texas

Tuesday,
May 19, 1981

PURSUANT TO ADJOURNMENT, the above-entitled matter
came on for further hearing at 9:00 a.m.

APPEARANCES:

Board Members:

CHARLES BECHHOEFER, ESQ., Chairman
Administrative Judge
Atomic Safety & Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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I N D E X

WITNESSES:

DIRECT CROSS PEDIRECT RECROSS BOARD
EXAM.

A Panel:

George W. Oprea, Jr.
Joseph W. Briskin
Richard A. Frazar
John M. Amaral

By Mr. Sinkin: 2171 2269
By Mr. Reis 2221 2291

By Judge Lamb 2231

A Panel:

Jerome H. Goldberg
Richard A. Frazar
(Resuming)

By Judge Hill 2300

By Mr. Hager 2305
By Mr. Reis 2384

P R O C E E D I N G S

9:30 a.m.

JUDGE BECHHOEFER: Good morning, ladies and gentlemen.
Before we start this morning, are there any
preliminary matters which anyone wishes to raise.

(No response.)

JUDGE BECHHOEFER: Absent any, we will continue
with Mr. Sinkin's examination.

MR. SINKIN: Thank you, Mr. Chairman.
Whereupon,

GEORGE W. OPREA, JR.

JOSEPH W. BRISKIN

RICHARD A. FRAZAR

JOHN M. AMAPAL

the panel of witnesses on the stand at the time of the
adjournment, having been previously duly sworn, were examined
and testified further as follows:

CROSS-EXAMINATION

BY MR. SINKIN:

Q. Mr. Oprea, good morning.

BY WITNESS OPREA:

A. Good morning.

Q. Yesterday I asked you a question, what program
other than a QA/QC program is there to document and verify
the quality of construction at nuclear powerplants; and

-2

1 your answer to that was in part that built into construction
2 itself is a quality component, and the specifications and
3 procedures are developed in an atmosphere where quality
4 is considered.

5 Is that an accurate characterization?

6 BY WITNESS OPREA:

7 A That's accurate.

8 Q Let me return to my question, which is, what
9 program is there other than QA/QC is there to document
10 and verify the quality of construction in a nuclear powerplant?

11 Do you understand that? I'm not -- The specification
12 or procedure instruction is a document, but does not in
13 fact document what was done. It tells what should be done.

14 My question was what program other than the
15 QA/QC program is there to document and verify the quality
16 of construction of nuclear powerplants?

17 BY WITNESS OPREA:

18 A I really don't understand the question, but
19 if you exclude quality assurance and quality control program
20 the built-in qualitative aspects of design, procuring and
21 constructing the project, I don't know what other program
22 you are identifying, unless there are off-site programs.

23 Q Well, that's an answer to my question.

24 Mr. Frazar yesterday defined QA as planning
25 what you do, doing what you plan, documenting that you

-3 1 did it; and roughly defined QC as being sure that what
2 is being done is being done right.

3 Do you agree with those two definitions of
4 the two programs, Mr. Frazar?

5 BY WITNESS FRAZAR:

6 A I think it's a little mischaracterization of
7 my testimony regarding the QC function.

8 Q Fine.

9 BY WITNESS FRAZAR:

10 A There are many steps taken, both by the doers
11 and by the QC people to assure that the work has been done
12 correctly.

13 I think I talked in terms of the definition
14 of QA and QC as it appears in the first parts of Appendix
15 B, and I expressed that QC is the portion of the activities
16 that is done to document the correct performance of the
17 task, that the requirements had been done.

18 Q Documented evidence that the requirements had
19 been met?

20 BY WITNESS FRAZAR:

21 A Yes, and the QC people do that as a portion
22 of the total program.

23 Q Well, let me be sure what I understand. What
24 I said was QC is being sure that what is being done is
25 being done right.

1 You are saying QC is documenting that what
2 has been done has been done correctly?

3 BY WITNESS FRAZAR:

4 A. Yes, that's correct.

5 Q. Mr. Oprea, did you have that difference between
6 QA and QC clearly in your mind prior to the order to show
7 cause?

8 BY WITNESS OPREA:

9 A. In my mind? The organization of it was clearly
10 in my mind. There was a responsibility that we had, that
11 our people had; and as I indicated in prior testimony,
12 which I believe was yesterday, that there's an illusion
13 factor that impeded the ability to focus the degree of
14 energies and attention on the quality assurance aspect
15 vis-a-vis what they were doing pertaining to quality control.

16 Q. They were so busy with quality control they
17 didn't have time to do the quality assurance aspect?

18 BY WITNESS OPREA:

19 A. Well, let's just say it was an unfortunate
20 oversight.

21 Q. The Bechtel alternatives that we discussed
22 yesterday, the A through E, repeated referenced QA/QC as
23 a sort of single entity being dealt with in the alternatives.

24 But I get the impression from both of your
25 testimonies that you consider them in a sense separate

1 elements to be dealt with, perhaps even in different ways.

2 QA would be dealt with in one way by one group
3 of people; QC to be dealt with in another way by another
4 group of people.

5 Is that an accurate characterization?

6 BY WITNESS OPREA:

7 A. They are not independent functions in the way
8 you speak of them. There is a continuum that takes place.

9 If you just use the word quality assurance
10 in regard to an organization, most people do not really
11 fully identify all the aspects that make up a quality assurance
12 program.

13 So you use quality assurance/quality control
14 to indicate that you have a programmatic direction, which
15 is in the quality engineering area, which is quality assurance
16 vis-a-vis that which is inspection, which is quality control.

17 There is no disconnect or discontinuity. There
18 is a flow from the quality engineering into the quality
19 control; and then based on what they do, and verification
20 with perhaps identified deficiencies, there is a flow back.

21 Q. But at the same time you would not expect one
22 individual to be doing both QA and QC, would you?

23 BY WITNESS OPREA:

24 A. In a given organization?

25 Q. Yes.

1 BY WITNESS OPREA:

2 A Not normally.

3 Q In STP?

4 BY WITNESS OPREA:

5 A We would not expect to have it that way.

6 Q Right.

7 BY WITNESS OPREA:

8 A Unless the trends reflected that.

9 Q Okay. Yesterday Mr. Reis asked whether
10 Mr. Amaral evaluated a Mr. Charles Singleton, and Mr. Amaral
11 replied that he did not recall that name.

12 Would you tell me, Mr. Oprea, what is
13 Mr. Singleton's position with the project?

14 BY WITNESS OPREA:

15 A I know Mr. Singleton works with Brown & Root
16 in quality control, and perhaps Mr. Frazar has a little
17 better feel for his connection.

18 BY WITNESS FRAZAR:

19 A Mr. Singleton is the superintendent over the
20 quality control organization.

21 Q Is that the highest QC position in Brown &
22 Root?

23 BY WITNESS FRAZAR:

24 A No, it is not.

25 Q Who is above it?

1 BY WITNESS FRAZAR:

2 A The manager of quality control.

3 Q Who is that?

4 BY WITNESS FRAZAR:

5 A Who is that person?

6 Q Yes.

7 BY WITNESS FRAZAR:

8 A Mr. Gunter.

9 Q Mr. Gunter, okay.

10 In Bechtel's evaluation, were they asked to
11 look at Brown & Root's QC, as well as the QA program?

12 BY WITNESS FRAZAR:

13 A Brown & Root -- Bechtel -- I presume that
14 you're talking about Bechtel's study that they did, which
15 is characterized in what is called the Final Appeasement
16 Report that is part of the response to the show-cause order.

17 Q Well, let me be sure that I understand.

18 Mr. Amaral talked about evaluating a number
19 of personnel, making some recommendations about them. If
20 that is considered a part of the study you are referring
21 to, then --

22 BY WITNESS FRAZAR:

23 A Yes, and I think I get your question. In the
24 sense that Mr. Amaral was asked to evaluate the personnel,
25 he was asked to evaluate what we call key positions; and

-8 1 key positions went to the level of the manager of quality
2 control.

3 Q That was as low as it went in the hierarchy?

4 BY WITNESS FRAZAR:

5 A That's correct.

6 Q Mr. Oprea, yesterday Mr. Hager discussed with
7 Mr. Amaral Exhibit 5 to the order to show cause pamphlet
8 prepared by Brown & Root from a letter delivered in January
9 1980, which I believe Mr. Newman said was Exhibit 46.

10 Are you familiar with this pamphlet?

11 BY WITNESS OPREA:

12 A Yes, I am.

13 Q In the pamphlet in Section 2, entitled, "The
14 Role of QC Personnel at the South Texas Project" --

15 MR. NEWMAN: Mr. Chairman, excuse me, and excuse
16 me for interrupting, Mr. Sinkin. I'm going to object to
17 questions along this line.

18 I don't believe the questioning with respect
19 to the content of the QC document that Mr. Sinkin is referring
20 to is really relevant to Questions 42 through 45, unless
21 he can establish a link.

22 I have no objection, but I'm not quite sure
23 I understand the relationship; and if there is, it should
24 be covered at some other time.

25 I'm not objecting. If you can establish where

1 you're going, I have no problem.

2 MR. SINKIN: Briefly, where I'm going is that
3 in this document there is extensive discussion of what
4 is referred to as QA/QC; but in fact, the discussion focuses
5 entirely on QC.

6 What I wanted to explore was Mr. Oprea's knowledge
7 of this pamphlet and how he responded to it, and leading
8 from that into does Brown & Root recognize clearly --

9 MR. NEWMAN: I understand where you're going,
10 but what I don't have in mind is the question to which
11 it is relevant.

12 There are four questions, 42, 43, 44 and 45,
13 and the immediate relevancy of the question to that material
14 is not clear to me.

15 MR. SINKIN: We're dealing with the response
16 of the HL&P organization to the questions and problems
17 raised in quality assurance and quality control.

18 How was that response -- the history out of
19 which that response was, and part of the response is the
20 response itself to that history.

21 MR. NEWMAN: Yes. I guess, Mr. Chairman, I
22 can understand that that matter is relevant to the total
23 inquiry that the Board has to make.

24 It's not relevant, as I can determine it, to
25 any aspect of Questions 42 through 45, and the answers

1 relating to that.

2 BY MR. SINKIN:

3 Q In those questions dealing with the aspects
4 of the project QA management organization, I would consider
5 one aspect of that a clear recognition of what QC functions
6 are and what QA functions are, and the interrelationship
7 between Brown & Root and Houston Lighting & Power in the
8 implementation of those functions.

9 MR. NEWMAN: Mr. Chairman, excuse me. The
10 testimony talks about two or three different subjects.
11 It talks about actually one subject in many different --
12 several different forms, namely alternative QA/QC organizations.

13 The question is altering the structural matters
14 in a QA/QC organization, and the content of the pamphlet
15 would not appear to me to be relevant to any matter within
16 that portion of Mr. Oprea's testimony that we've determined
17 we shall hear cross-examination on.

18 Now, this is not an objection, by the way,
19 to asking the questions on that matter at a later time.

20 JUDGE BECHHOEFER: Mr. Sinkin, would it matter
21 if these were saved until after Mr. Amaral left?

22 MR. SINKIN: The only problem I have, Your
23 Honor, was that Mr. Oprea's testimony after Mr. Amaral
24 leaves would have been handled by Mr. Hager.

25 This was part of something I was going to cover.

-11 1 I guess we can hold it if the finishing up
2 with Mr. Amaral is the higher priority.

3 I do think it is directly relevant. I do think
4 that what we're talking about here is how well received
5 the QA/QC function is, and that that's the basis for the
6 decision on selecting A; and that there is a real confusion
7 in the mind of Brown & Root reflected in this pamphlet,
8 and has that confusion been corrected by the adoption of A.

9 It seems to me that's why A was supposedly
10 adopted.

11 MR. NEWMAN: I think that the relationship
12 is for -- We're trying to get on with those things that
13 are relevant to Mr. Amaral's testimony, and I would like
14 to get those questions on so that we can release Mr. Amaral
15 and get back to....

16 JUDGE BECHHOEFER: Mr. Sinkin, I think we'll
17 hold it, but you'll be allowed to ask the question.

18 MR. SINKIN: Okay, fine.

19 JUDGE BECHHOEFER: You can carry on with this
20 particular area that you've covered after Mr. Amaral leaves.

21 MR. SINKIN: Okay. Thank you.

22 BY MR. SINKIN:

23 Q Returning to the choice of Alternative A,
24 Mr. Oprea, you stated yesterday that you approach -- stress
25 building on the foundation already in place and beefing

1 up that foundation; is that correct?

2 BY WITNESS OPREA:

3 A That was based on the tests of the criteria
4 and the final evaluation and judgment was made that Option
5 A was the best for the South Texas Project.

6 Q But in implementing Option A, what you were
7 doing was building on the existing foundation and beefing
8 that up? I believe that's what you testified yesterday.

9 BY WITNESS OPREA:

10 A Building on a foundation that was much stronger,
11 and that foundation was predicated on use of documentation
12 and the interrelationships of organizations that provide
13 you with the stronger base to spring forward on.

14 Q Well then, perhaps I misunderstood you yesterday.
15 You weren't saying that you were building on an existing
16 foundation and beefing it up.

17 You were saying that you were going to be working
18 on the foundation, too?

19 BY WITNESS OPREA:

20 A If you recall, we talked about the changed
21 procedures, that some of the procedures had to be changed.

22 I said for the most part, part of the system
23 was in place. You had to make modifications to procedures
24 that would give us a much, much greater approach in regard
25 to the utilization of the procedures in the construction

1 process, as well as the use of the quality assurance procedures
2 against the construction process.

3 Q A major item in the order to show cause was
4 intimidatio and harassment of QC inspectors by construction
5 personnel.

6 That's the relationship right down at the dirt
7 level, if you will, of the project. It's not in the hierarchy
8 or in management. It's right down at the grass roots.

9 What in the implementation of A addresses that
10 sort of problem?

11 BY WITNESS OPREA:

12 A There are a number of things that are ancillary
13 to A that have been addressed relative to the particular
14 issue.

15 First, you have to understand, Mr. Sinkin,
16 that conflict on a nuclear projec. is not uncommon. It
17 happens whether it's South Texas, Palo Verde, St. Lucy,
18 Baldwin, et cetera.

19 That's just the nature. There's some friction
20 that does exist between construction and quality assurance
21 personnel.

22 Q That friction doesn't usually produce orders
23 to show cause, though?

24 BY WITNESS OPREA:

25 A Pardon?

1 Q That friction usually doesn't produce reason
2 to show cause?

3 BY WITNESS OPREA:

4 A Well, that depends on whether or not there
5 was a direct reason for show cause. It's a perception
6 you might have.

7 Q Right.

8 BY WITNESS OPREA:

9 A What we have done is do a number of things
10 in regard -- First, that brochure you're talking about
11 has been totally modified. The brochure that you are speaking
12 of is no longer in existence. It's not part of the project.
13 That's part of the past, just as some of the things that
14 relate to show cause.

15 There have been a number of presentations given
16 by Mr. Rice, the new vice president of Brown & Root, to
17 people relative to the need to work together, there will
18 be no conflict, none of these things that have these signs
19 of intimidation.

20 I have talked to people. Our orientation program,
21 both Brown & Root and Houston Lighting & Power Company,
22 is an ongoing activity for all new employees that relate
23 to the South Texas Project.

24 There is retraining that pertains to it as
25 well.

-15 1 Q Okay. Anything, Mr. Frazar? Did you want
2 to add anything, Mr. Frazar?

3 BY WITNESS FRAZAR:

4 A No.

5 Q Okay. The purpose of those programs is to
6 prevent any recurrence of the kind of things that happened
7 in the order to show cause.

8 On May 4th you released I&E Report 81-11, which
9 was the report that came with the most recent investigation
10 by the Nuclear Regulatory Commission.

11 In that report there is substantial allegation
12 that at Brown & Root, the general superintendent intimidated
13 employees underneath him; and in particular, telling them
14 not to talk to Houston Lighting & Power personnel about
15 problems at the site.

16 My question is, should the new programs you're
17 putting into effect have prevented that kind of activity
18 by Brown & Root's general superintendent?

19 MR. NEWMAN: Mr. Chairman, I'm going to object
20 to that question.

21 We have a previous arrangement which Mr. Sinkin
22 may not be aware of, the matter of responding to things
23 associated with 81-11 was considered at the time the Goldberg/
24 Frazar panel was up, and we indicated at that time that
25 we were evaluating 81-11, and that at some point during

1 the recall of -- excuse me.

2 The agreement, as I recall now, is that
3 Dr. Broom and Mr. Vurpillat would provide the first testimony
4 on that, and to the extent that the Board and the parties
5 wanted further information on 81-11, we would recall
6 Mr. Goldberg and Mr. Frazar.

7 So it simply is a matter out of turn at this
8 point; but, again, not a question that is inappropriate
9 at a later point in the proceedings.

10 MR. REIS: I don't remember an agreement that
11 way. I would like to be pointed to the record on it.

12 The question that Mr. Sinkin asks right now,
13 I think --if I may rephrase it -- was did the adoption --
14 Was the adoption of Option A to prevent this sort of thing
15 recorded in 81-11.

16 I don't think from all that was said, and much
17 more was said in much more words, I don't think that would
18 necessarily be out of line here in that we're looking at
19 the choice of the options and why they were adopted and
20 what they were to do.

21 MR. NEWMAN: Mr. Chairman, with all respect
22 to Counsel, it would seem to me that to talk about this
23 type of thing without having discussed the thing itself,
24 as was intended by the Board and the parties, is not going
25 to lead to a useful record.

-17 1 Now, if one discusses and there's testimony
2 on the record regarding 81-11, whether it be from the Staff
3 or Brown & Root or HL&P, then is when, it seems to me,
4 he can ask questions, such as, "Shouldn't your program
5 have prevented," or matters of that type.

6 But to talk about matters of that type before
7 81-11 is in fact discussed on the basis of the actual
8 investigation, it seems to me, is premature and not useful
9 to the record.

10 MR. REIS: I do not remember any discussion, and
11 I may be wrong, if I can be shown the record part where
12 we would wait for Mr. Broom and Mr. Vurpillat to discuss
13 81-11.

14 MR. NEWMAN: Mr. Reis, I think --

15 MR. REIS: If you can give me a citation.

16 MR. NEWMAN: We're going to do that. So will
17 you hold that question, unless the Chair wishes to rule
18 on some other grounds.

19 MR. HAGER: Mr. Chairman --

20 JUDGE BECHHOEFER: I would like to hear
21 Mr. Amaral's reaction to it. I would like to know what
22 his reaction was and we're not going to get it if we wait.

23 I'd like to know whether he thinks the plan --

24 MR. NEWMAN: I guess he can ask whether Mr.
25 Amaral is familiar with 81-11.

1 JUDGE BECHHOEFER: I think it could be asked
2 in a hypothetical, if that's preferable.

3 Is the alternative adopted likely to lead to
4 detection of matters of this sort. I think it's both relevant
5 and is something Mr. Amaral might comment on.

6 I know the question was not asked directly
7 to Mr. Amaral. I would certainly ask for his comments
8 on it.

9 MR. NEWMAN: The difficulty is that you're
10 in the Twilight Zone between the actual report, 81-11,
11 and some hypothetical that may be based on 81-11.

12 It's exactly the same kind of problem we got
13 into when Mr. Reis was cross-examining the other day and
14 used totally hypothetical facts, and others started to
15 supplement these hypothetical statements by reading from
16 the actual document itself.

17 The result was, I think, confused questions
18 and answers.

19 MR. REIS: Mr. Chairman, I believe we cross-
20 examined Mr. Jordan on 81-11.

21 Now, let me say one other thing, that the use
22 of the examples and not sticking to hypotheticals was only
23 because Counsel demanded it, and I was trying to accommodate
24 Counsel when he demanded that the hypotheticals had no
25 basis in fact. We went to the actual examples only because

1 Counsel asked that we go to actual examples.

2 It was not an attempt to move back and forth
3 between hypotheticals and actual, which by the way, there
4 would be nothing wrong with that either.

5 MR. HAGER: Mr. Chairman, if I could speak
6 on this.

7 We're talking about an I&E Report. The vice
8 president of HL&P in charge of nuclear would be expected
9 to be familiar with this report.

10 MR. NEWMAN: There is no question about that.

11 JUDGE BECHHOEFER: Well, I think the question
12 was whether we consider it now or later, and I think one
13 of the primary reasons for considering at least an aspect
14 of it now is so we can hear Mr. Amaral's views --

15 MR. HAGER: I didn't finish my comment. I
16 might suggest that we might ask Mr. Oprea first to finish
17 out the record before we turn to Mr. Amaral, so that we
18 might proceed with this.

19 MR. SINKIN: Mr. Chairman.

20 JUDGE BECHHOEFER: Yes.

21 MR. SINKIN: I would be happy to read for
22 Mr. Amaral or to give him to read the precise allegation
23 and the investigative findings to which I am referring.

24 (Bench conference.)

25 MR. SINKIN: I would be happy to read it into

1 the record.

2 JUDGE BECHHOEFER: I don't care whether we
3 hear it as a hypothetical or as a specific item, but I
4 would like Mr. Amaral's reaction, and if we don't get that
5 today, we're not going to get it.

6 MR. SINKIN: I can even try it as a hypothetical,
7 if you want.

8 JUDGE BECHHOEFER: I don't object either way.

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1 JUDGE BECHHOEFER: I don't care whether we handle
2 it as a . . . trying to prove whether what happened in 8111 --
3 what is reported in 8111 happened or didn't happen. I would
4 like to know if it did happen, is this the kind of thing that
5 plan A or alternative A was supposed to take care of.

6 MR. NEWMAN: Okay. The question then --

7 JUDGE BECHHOEFER: That's what I -- That's the
8 only reason that I think it should be asked at this time.
9 He's the one perhaps that should go into that.

10 MR. SINKIN: Mr. Chairman, I'm not sure where we
11 stand. Can I proceed to questioning Mr. Amaral and Mr. Oprea
12 about 8111 now?

13 (Bench conference.)

14 MR. NEWMAN: Mr. Chairman, it is my understanding
15 that we were going to take a moment to review in the record
16 what the Board had ruled on with respect to 8111 and the
17 discussions of 8111. It may be we'll find more indication in
18 the transcript where it is discussed. Mr. Axelrad is searching
19 the record as to Mr. Reis's question.

20 (Counsel reviewing file.)

21 MR. HAGER: Mr. Chairman, I would note that
22 Mr. Amaral and Mr. Oprea are conferring, and I think that we
23 have a ruling on that that they would only be conferring on
24 the question of who would answer a question, not on matters
25 of substance.

1 I had originally asked that any conference of
2 this sort be put on the record, and I think we have a ruling
3 on that. But I would ask that Mr. Amaral and Mr. Oprea be
4 requested to simply state for the record what it is they are
5 conferring about, they have been conferring about for the last
6 minute or so.

7 MR. NEWMAN: Mr. Chairman, I see no purpose for
8 that objection. If the two gentlemen were discussing something,
9 there is no question pending now.

10 JUDGE BECHHOFFER: I believe our ruling earlier,
11 if I recollect it, was that in responding to specific questions
12 they weren't supposed to confer.

13 MR. HAGER: This appears at page 1067 in the record
14 on May 15th that the Board ruled that there would be no
15 conferring between witnesses.

16 MR. REIS: Mr. Chairman, that was not in general.

17 MR. HAGER: There is a question pending before
18 the witnesses here, and they have been conferring. I think it
19 is a reasonable assumption that they are conferring about the
20 question.

21 (Bench conference.)

22 MR. HAGER: It seems relatively easy to ask the
23 witnesses what they have been conferring about and put that
24 on the record.

25 MR. AXELRAD: Mr. Chairman, with respect to the

1 inquiry that's been made before, it is a bit difficult to
2 thumb through the entire transcript. But what occurred was
3 at the time of the discussion of the motions on May 13 in
4 connection with the proposed new contentions that the
5 Intervenors had wanted to bring into the proceeding pertaining
6 to 8111, at transcript page 986 -- Does everyone have that?

7 JUDGE BECHHOEFER: No. It is in the other room.

8 MR. AXELRAD: Okay.

9 In responding to that motion, I described why
10 the new contentions were not necessary and why new discovery
11 was not necessary and that type of thing. I then made this
12 suggestion to the Board. We would suggest that this be
13 accomplished in the following fashion:

14 We will be providing testimony next week by a
15 panel of Brown & Root witnesses, Knox Broom and Mr. Ray Vurpillat.
16 They will be prepared to respond to cross-examination and
17 Board questioning concerning the investigation that has been
18 conducted of the matters discussed in 8111 and 18117 and
19 the actions being taken by Brown & Root as a result thereof.

20 Once this basic information is made a part of the
21 record, we would then propose to recall the witness panel,
22 Mr. Goldberg and Mr. Frazar, who will be able to respond to
23 cross-examination or to questions concerning HL&P determinations
24 on these matters.

25 Proceeding in that fashion we believe will permit

1 the establishment of an orderly and complete record on these
2 matters. Obviously, with respect to NRC witnesses when they
3 are called would also be able to respond to cross-examination
4 under 8111 and 8117.

5 And that was the proposal that we made with
6 respect to the motion for new contentions that the Intervenors
7 had put forth. And it was our understanding, even though that
8 was in essence a concensus arrived at by the parties for the
9 ruling, the new contention was not adopted and we believed
10 what had happened was there was a determination right then
11 whether we would wait to handle these matters.

12 JUDGE BECHHOEFER: Do you propose to bring
13 Mr. Amaral back then? Because I think that he can answer
14 a few questions about whether the structure that's been
15 proposed is likely to be able to resolve questions of that
16 sort.

17 I will allow them to answer hypotheticals then
18 which may be better. He can ask the questions as hypotheticals.

19 MR. NEWMAN: Let the question be: Is the
20 organizational framework that's been established one that is
21 likely to catch instances of --

22 JUDGE BECHHOEFER: That's what the question was.

23 MR. NEWMAN: -- possible intimidation or harassment?
24 Is that the general question?

25 MR. SINKIN: Can I ask my own question?

1 JUDGE BECHHOEFER: Yes. That's what I understood
2 the question was. But you can examine the details of whether
3 what happened in 8111 --

4 MR. SINKIN: I did want to get into -- I mean,
5 you have various levels of this organization. I want to get
6 into how this program works as you move down those levels.
7 You know, sure. it is supposed to catch violations. The answer
8 is yes, obviously, it's supposed to catch violations.

9 I want to get into how it is going to catch
10 those violations.

11 MR. NEWMAN: Mr. Chairman, I don't have any
12 objection to the hypothetical question we've just been
13 discussing. I do have a problem with talking about 8111 at
14 this point because we have not put the material on the record
15 in the manner had planned.

16 8111, for example, does not pertain to
17 intimidating QA or QC inspectors. It is all on construction
18 sites. And, so, it seems to me that we would be asking. . .
19 8111 without a proper foundation having been laid for it in
20 the manner that we thought the Board would want to have it
21 presented and the parties.

22 Again, I have no objection to the hypothetical
23 question: Will this structure be better designed to catch
24 instances of possible intimidation and harassment of QC
25 inspectors?

1 MR. REIS: Mr. Chairman, I think as -- I did
2 never -- I don't see where the parties agreed or there was
3 any ruling. There was a suggestion that we would discuss
4 amendment of contentions later. But there was no agreement
5 that 8111 could not be used for other purposes prior to that
6 time, and I don't think there was any intent at that time.
7 I see no ruling at that time, and I see no statement explaining
8 by the parties that that was the intent at that time.

9 I agree we did put off the framing of new
10 contentions until later, but that's it.

11 JUDGE BECHHOEFER: Let's see where we're going.

12 MR. SINKIN: If that is the case, Mr. Chairman,
13 I would like to use -- We have a, you know, live event, a real-
14 time event. We're not dealing with a hypothetical out-of-the-sky
15 situation that I'll be inventing as I go along. I would like
16 to use 8111 to get a specific response to a specific event
17 and see how the system works or doesn't work.

18 JUDGE BECHHOEFER: Right. But the only thing I
19 would have some caution about is that I don't think this is
20 the time to prove whether what happened, what was the
21 importance of 8111 actually happening.

22 MR. SINKIN: All right. We will assume for
23 arguendo that 8111 happened without --

24 JUDGE BECHHOEFER: Just assume that 8111 is a
25 hypothetical.

1 MR. SINKIN: All right. I will assume that 8111
2 is hypothetical.

3 BY MR. SINKIN:

4 Q Assuming that 8111 is a hypothetical, Mr. Amaral
5 and Mr. Oprea, and that hypothetically a Brown & Root foreman
6 intimidated the employees who talked to HL&P personnel or
7 who talked to Brown & Root supervisory personnel, should the
8 new system developed under option A have detected that behavior
9 by the general superintendent?

10 BY WITNESS OPREA:

11 A The new system under option A is all-encompassing,
12 Mr. Sinkin. It is not only organizational. It represents
13 the orientation program, the training program, the audit system,
14 the modification of procedures, documentation control, all the
15 things that are related directly and indirectly to show-cause.

16 What you have is a case of several thousand people,
17 three to four thousand people on site subjected to continuing
18 communications between their management and our management of
19 HL&P to the people on site asking people to be open, to be
20 forthright, to be candid, and to be truthful in regard to
21 what is occurring on the project.

22 The individual responsibilities that everybody
23 has on it we hope would be such that they will be open.
24 Unfortunately, you are going to have certain isolated
25 conditions. Whatever makes people not want to conform and do

1 things, whatever you want to put into place to police their
2 activities, there will be isolated conditions that will
3 occur from time to time.

4 I'm convinced what we've done organizationally
5 and in all other areas as pertains to that organization have
6 fortified many-fold the happenstance of any reoccurrence again.
7 But there will be isolated cases. This is not a perfect world.
8 You are dealing with human beings that have different
9 personalities and different viewpoints. We just hope that all
10 the people involved with the South Texas Project recognize
11 that they have a responsibility to the project to be open,
12 to be candid, and I have solicited in my own visitations on
13 site, as recent as two weeks ago, when I was down there
14 talking to lay workmen, talking to supervisors when I walked
15 through the project. I know Brown & Root management does the
16 same thing.

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1 BY MR. SINKIN:

2 Q Well, let me ask you, in the structure in the
3 way personnel interrelate, you have a Brown & Root foreman
4 who engages in certain behavior. Somewhere in this structure
5 the Brown & Root foreman interacts with Houston Lighting & Power.

6 Let us assume hypothetically that we are dealing
7 with the electrical termination shack.

8 Is there a Houston Lighting & Power QA/QC person
9 that deals with that electrical termination shack on a regular
10 basis?

11 BY WITNESS OPREA:

12 A There are periodic reviews and audits that take
13 place, but again using the hypothetical case, if an individual
14 that you audit, perhaps, let's say, hypothetically, the
15 individual happens to be the allegor, identifies that that
16 individual did lie in regards to the audit and did not answer
17 questions that could have led us to then to the solution of
18 the problem, that frustrates our efforts, and indeed I'm
19 frustrated when that happens, because we feel that it is a
20 good project where a lot of people should be doing openly and
21 candidly, and when they don't respond it frustrates me.

22 I've been frustrated because of the many things
23 that have occurred that I know there's been a best-foot-forward
24 put on the part of both HL&P management and lower tier manage-
25 ment and employees, as well as Brown & Root counterparts, and

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he
1 things still happen on an isolated basis, but the proof of the
2 pudding is that when we find out about it we weed them out.

3 Q. You weed them out.

4 You say that there would be audits of the
5 electrical termination shack. Is that audit conducted by an
6 HL&P QA person?

7 MR. NEWMAN: Mr. Chairman, I am going to object to
8 this because we're now just truly getting into the substance
9 of 81-11 loosely masked in the context of the hypothetical
10 question.

11 I thought we were trying to get at the idea why
12 Mr. Amaral was here, as to whether or not structurally things
13 had changed in such a fashion as to help in the problem of
14 intimidation and harassment.

15 Further detailed questions on 81-11 at this point
16 are just really not in line with the substance of the testimony
17 at this point.

18 There's going to be lots of testimony on 81-11 if
19 we could determine what the facts, who should have done what,
20 and so forth.

21 I thought the idea was to get kind of an
22 Amaral-Oprea overview as to whether or not these structural
23 changes would help in general situation where there might be
24 occasions of harassment.

25 MR. SINKIN: Mr. Chairman, I don't see any real

1 in asking for gross generalizations from either Mr. Oprea or
2 Mr. Amaral, but I do see real value in tying down a specific
3 kind of situation where you have a specific construction unit.
4 So we won't talk about the electrical termination shack, but
5 in any other construction unit you want.

6 There's some kind of a relationship between HL&P QA
7 and that unit. What I'm trying to explore is under Option A
8 what is HL&P's QA role regarding that unit, what is B&R's QA/QC
9 role regarding that unit, how do you interrelate where the
10 lines of authority are, what are the detection systems; that's
11 the implementation of A. Sure, A looks great on paper. This
12 whole thing looked good on paper in 1976 and '77 and '78.

13 JUDGE BECHHOEFER: Well, my question to you is,
14 would it be -- if you go beyond the general, couldn't that
15 wait until the other testimony on the details comes in.

16 This in particular, I would have thought, would be
17 to try to get some sort of a comparison between them just in
18 general on how the various systems would react to a situation
19 of that sort, and my only question to you is how much detail
20 do we really have to get into for that type of analysis,
21 because the details of what happened will be brought out in
22 much more detail later.

23 MR. SINKIN: I'm much less concerned with the
24 details of what happened than the details of how the system
25 worked. That's what I'm trying to get at.

1 MR. NEWMAN: Mr. Chairman, the inherent device
2 in things like this is that major factors are not conveyed
3 if we're talking just in part about 81-11.

4 For example, 81-11 does not involve a facility
5 that does any safety-related work, and so the interface
6 between QA/QC people and the rest of the staff is different
7 in those circumstances.

8 But the fact of the matter, that can be fully
9 developed at the time that 81-11 is discussed in toto, and I
10 really don't think that we're making good use of time of the
11 Oprea-Amaral presentation now to go into the details of 81-11
12 when it's perfectly obvious that no good foundation has been
13 laid yet.

14 MR. SINKIN: Mr. Chairman, I would point out, and
15 I think the record will reflect that Mr. Oprea was answering
16 my questions very directly and very forthrightly, understood
17 the questions and we were exploring something substantive,
18 and that Mr. Newman has jumped in, probably because we were
19 exploring something substantive, and objected again with a
20 major speech, and I don't see how we can get anything --

21 MR. NEWMAN: Now, Mr. Skinkin, look; I understand
22 your position, you're not an attorney. I don't want you
23 coming in --

24 MR. HAGER: Excuse me, Mr. Newman, I have made
25 that very same allegation against you on several occasions.

3-5 1 It has nothing to do with somebody being an attorney or not an
2 attorney. It's been going on in this proceeding so far and
3 I'm going to suggest --

4 MR. NEWMAN: Mr. Chairman, the only reason I make
5 that point is because Mr. Sinkin, if he's going to participate
6 in this proceeding, has to be held to the standards of an
7 attorney before the Board and this agency, and his characteri-
8 zation of how and what I have objected to questions is entirely
9 improper in the circumstances of the past few moments of
10 discussion.

11 MR. HAGER: I would admit the very same characteri-
12 zation and I would voice that characterization for Mr. Sinkin
13 at this time.

14 JUDGE BECHHOEFER: Well, let's not have --

15 MR. REIS: Mr. Chairman, we're getting completely
16 away from the question.

17 Can we have the question read again so we can see
18 where are because I have forgotten what the question was, quite
19 frankly, at this point.

20 We've gotten involved in six dozen other things
21 and away from the proceeding.

22 Let's have the question again and let's see what
23 it is. Let's have a ruling on the question and let's go
24 forward.

25 MR. SINKIN: Rather than have tape have to go back,

1 I think I can come pretty close to what the question was.

2 BY MR. SINKIN:

3 Q There would be at HL&P QA persons, or someone from
4 HL&P who would be in touch with this construction unit and
5 would know what was going on, and you said there would be
6 audits.

7 My question was, were the audits that you were
8 talking about carried out by an HL&P QA person? I believe
9 that was the last question before the objection.

10 JUDGE BECHHOEFER: I think he can answer that
11 question.

12 We have the overlay that it is to be considered a
13 hypothetical in that we haven't proved yet that that actually
14 happened.

15 MR. NEWMAN: Mr. Chairman, we have to establish
16 whether or not the work involved is described as a construction
17 unit, whether or not that construction then is engaged in
18 safety-related activities or not.

19 JUDGE BECHHOEFER: Okay. Well, add that to your
20 question.

21 MR. SINKIN: Mr. Chairman, I would point out that --

22 JUDGE BECHHOEFER: I just want to get on with it,
23 but I do want to keep it to the -- we're comparing different
24 alternatives here, and on that level, I guess there's a
25 hypothetical you ought to spell out, whether it's safety-related

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1 or not.

2 MR. SINKIN: Well, let me try to do that.

3 JUDGE BECHOEFFER: All right.

4 BY MR. SINKIN:

5 Q Under your Option A, on a construction unit where
6 there is no safety-related work going on, I presume that there
7 still is not tolerated intimidation of personnel, prevention
8 personnel from talking to Houston Lighting & Power in a
9 meeting like that, is that correct?

10 BY WITNESS OPREA:

11 A We wouldn't tolerate any intimidation at any place,
12 anywhere, whether it's safety or not.

13 Q Okay. In the non-safety-related construction unit
14 is there an JL&P systematic interaction with that construction
15 unit?

16 BY WITNESS OPREA:

17 A I would ask Mr. Frazar if he would answer that
18 question.

19 BY MR. FRAZAR:

20 A Not unless we choose to do so. There is certainly
21 no requirement for us to have HL&P quality assurance inter-
22 action with non-safety-related areas.

23 If we as a company choose to have interaction,
24 that's our choice.

25 Q And if you do choose to do so, would the normal

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1 be that the interaction would take place through a Houston
2 Lighting & Power QA person?

3 BY WITNESS FRAZAR:

4 A Not necessarily. Let me take out of context the
5 South Texas Project. We have a quality assurance program that
6 we apply to other generating facilities and we choose to
7 implement that in various ways suitable to the particular need
8 at hand. We may use quality assurance department employees or
9 we may use other employees of other departments to implement
10 that program.

11 I might add, Mr. Sinkin, that with regard to the
12 alternative organization "A" and your question about the
13 intimidation, that Items 1, 4, 5, 6, 7, 8 and 9 of the show-
14 cause order all deal with the very basic restructuring and re-
15 formulating of our quality assurance program on the project,
16 and all of those measures are intended to put into place a
17 very effective and viable program that assures quality and
18 assures the requirements are met.

19 We cannot legislate morality of the people through
20 that program. We do, however, perform the implementation
21 reviews and audits in which we review objective evidence of
22 compliance to requirements, and whether or not there is some
23 behavior on behalf of the people, we still do our job in
24 accordance with the procedures and programs that are set forth
25 in the quality assurance program.

3-9 1 Q In terms of your procedures for audits -- let me
2 be sure I understand the use of the word "audit." That would
3 be someone that goes in and talks to people to find out how
4 things are going?

5 BY WITNESS FRAZAR:

6 A No, sir, not entirely. An audit is a process that
7 involves the review of the objective evidence of documents
8 that testify to the conformance of the requirements, the
9 review of actual activities performed by personnel in the field
10 to construct the plant.

11 In other words, we don't simply walk in and ask,
12 "How are you doing today? Is everything okay at the plant?"
13 And accept that as an answer and walk away.

14 Q When you do go in and talk to people, do you have
15 any rules regarding private conversations?

16 In other words, let's say you're walking into a
17 unit where there are seven people employed and one employee
18 is in charge, the second in command, and five of those are
19 under them, do you have any rules regarding that portion of
20 the audit that involves direct conversation being done in
21 privacy with each person within that unit?

22 MR. NEWMAN: Mr. Chairman, I don't object to this,
23 but we really are so far away from the question of alternative
24 organizational performance.

25 We have Mr. Oprea and Mr. Amaral here for that.

1 There's lots of time to discuss the question of
2 how audits are carried out. That's a whole subject, for
3 example, in Mr. Frazar's direct testimony to go before the
4 panel.

5 MR. REIS: Mr. Chairman, I agree that this is
6 getting tangential to the major issue on the alternative
7 and the choice of options.

8 I think the question of whether the options are
9 working under those chosen words can certainly be fully
10 explored later on, unless he can show, and the question can
11 show, of itself, that the other alternatives would lead to
12 lessening these conditions that are being talked about or
13 implied.

14 I don't think the questions are in order and
15 relevant to this part of the proceeding. That is not to say
16 that they are irrelevant to the whole proceeding.

17 MR. SINKIN: Mr. Chairman, what I perceive myself
18 as doing, and apparently others have not, is HL&P selected
19 Option A.

20 What I'm doing is exploring how they got into that
21 choice, to see what the characteristics of that selection are.
22 They made that choice. They chose not to use E, for example.
23 How will we be able to compare what might happen under E with
24 what is happening under A unless we go to the specifics of
25 what they are actually doing under A, and that's where my

3-11 1 questions have been going. I'm trying to get the specific
2 details of how they implement it.

3 MR. NEWMAN: Mr. Chairman, I object.

4 JUDGE BECHHOEFER: Now, really the question is,
5 I think, whether that needs to be established now or whether
6 we can go into some -- do you intend to --

7 MR. SINKIN: I'm almost done.

8 JUDGE BECHHOEFER: No, but what I'm saying is
9 what I think is wrong now is not so much the details of
10 implementation but what the differences would be under the
11 other organizational forms, and I intend to ask that after you
12 get done, but if you don't, then the -- I would like to hear
13 Mr. Amaral's comments on that.

14 But I'm just wondering how your latest question,
15 for instance, is -- does that relate to what would uniquely
16 happen under this particular form, or is that a detail which
17 we could get into later, which we will have to get into later.

18 MR. SINKIN: Well, your question is well taken.
19 It's hard to know what would be unique to any -- the only
20 unique thing that I can see in the A versus E is that of the
21 actual division, the separating out of the third party QA/QC.

22 If you're going to examine all of that, then all
23 you can do is deal with truly hypothetical, philosophical
24 terms.

25 JUDGE BECHHOEFER: That's what I'm saying. At this

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1 stage maybe that's all we should be doing. We are going to
2 get even more details than you have and into how audits are
3 performed, and that type of thing.

4 MR. SINKIN: Well, then let me move on to another
5 area of questions. I'll just leave that with the privacy or
6 non-privacy of the people in that particular unit, and I'm
7 certain we can get to that at a later time.

8 JUDGE BECHHOEFER: Let me ask you one thing.
9 Would you prefer to have me ask Mr. Amaral to comment
10 specifically later, or do you think -- would that interrupt
11 you greatly or not?

12 MR. SINKIN: No.

13 JUDGE BECHHOEFER: That will take some time.

14 MR. SINKIN: Well, I'm ready to explore a slightly
15 different area, so if Mr. Amaral would care to comment, that's
16 fine.

17 JUDGE BECHHOEFER: Mr. Amaral, I would like you to
18 comment first in terms of the general hypothetical example
19 that we've heard.

20 Do you think that under Option A, which is what has
21 been used, this is an appropriate way for a response to
22 harassment, let's say, or intimidation? That's what we're
23 talking about now. Is that an appropriate way for it to be
24 handled, and could you comment on how -- whether it would be
25 handled differently if a third party were the responsible one

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1 for QA/QC, whether Houston were responsible for the various
2 options that you considered? Would there be any -- I would
3 just as soon do it in the order of the particular options.

4 MR. NEWMAN: Excuse me. My only question is
5 whether you are doing it in the context of intimidation of
6 the QA/QC people or if it's more general, because there was
7 some confusion earlier on the statement that I made.

8 JUDGE BECHROEFER: Right. Well, I would like to
9 know -- again, if there are any differences, I'd like to know
10 how either intimidation or harassment of QA/QC people or
11 alternatively, intimidation of other people, to avoid getting
12 quality problems.

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1 BY JUDGE BECHHOEFER:

2 Q Which option would that be, just to tie it down?

3 BY WITNESS AMARAL:

4 A I would have to go through the options to
5 identify which ones brought in third parties.

6 Q Would that be the option "D" of an organizational
7 structure where HL&P contracts with another independent
8 organization to perform the current B&R QA/QC functions?

9 BY WITNESS AMARAL:

10 A That's the condition.

11 Q That's "D".

12 BY WITNESS AMARAL:

13 A Yes. Also, we had the same kind of reasoning
14 where should the utility be the interface that the doer
15 would be less likely to perform an act of harassment than if
16 it was their own people. But these are cases working from
17 reasoning, and once you know what you think you know about
18 human behavior, quality assurance engineers are not psychologists.

19 Q So I take it you couldn't establish a scale for
20 the experiences showing the number of violations per person
21 involved or something like that and establishing one
22 organization setup over another. You wouldn't have one
23 to graph. You wouldn't have one line running to one place
24 necessarily and another line showing a different degree of
25 harassment.

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1 BY WITNESS AMARAL:

2 A If you want to set up degrees, that would work.
3 Where there is a third party involvement, there would be less
4 harassment where the utility is the interface that would be
5 the next in line by degree.

6 Q I take it, then, in reaching your balances you
7 thought that other factors out balances that one factor.

8 BY WITNESS AMARAL:

9 A Positively. And that is the need to train your
10 people and the need to create a climate where people understand
11 each other's roles. Construction knows the quality assurance
12 responsibilities, knows the inspector has a funcation to
13 perform, and he needs to perform that without any undue pressure.

14 JUDGE BECHHOEFER: Mr. Sinkin, I guess you may
15 continue now.

16 BY MR. SINKIN:

17 Q Just following up for a moment, Mr. Amaral, you
18 spoke of an audit as one place where you've got sort of a high-
19 risk situation and you can easily see agitation and disharmony.

20 BY WITNESS AMARAL:

21 A Yes, sir.

22 Q In the -- Mr. Frazar discussed a number of
23 components that go to make up an audit. Let me focus for a
24 moment on that component that deals with the interaction of
25 human being to human being, as opposed to the examination of

1 documents and other review activities.

2 Would it be your opinion that audits conducted
3 in that manner are most effective if each person is part of
4 the interview as opposed to being interviewed in the presence
5 of their supervisors?

6 BY WITNESS AMARAL:

7 A I think if you have the -- If you have created
8 the right kind of atmosphere, that really doesn't make a
9 great deal of difference if the supervisor is there. If you
10 have not, certainly, the person being interviewed -- If you are
11 really talking about an audit and not something else, the
12 person interviewed might feel that he wouldn't be free to
13 disclose certain information that he might be asked.

14 Q Let me be sure we're both using the word "audit"
15 in the same way, because sometimes I'm not sure we are.

16 In your use of the word "audit," do you include
17 a person comes in and is trying to find out is there any
18 particular problems in how a particular construction unit is
19 operating?

20 Is that person conducting an audit?

21 BY WITNESS AMARAL:

22 A Yes.

23 Q Okay. Then we are using it in the same way.

24 Thank you.

25

1 BY WITNESS FRAZAR:

2 A I'd like to add something to Mr. Amaral's answer
3 there.

4 When you are using the terminology of determining
5 how a particular construction unit is operating it is pretty
6 broad, and we, as quality assurance professionals, do not
7 pretend, as Mr. Amaral stated earlier, to be psychologists
8 and to go into the bowels of human behavior and apply
9 psychology.

10 Our objective of performing an audit is to
11 determine on a factual basis whether or not the requirements
12 of the procedures and specifications have been met by people
13 performing the work activities.

14 Q Well, I think there's not necessarily a clear
15 distinction in many of the things that have been said between
16 psychological and the technological, if you will. When you
17 speak of a sense of responsibility, that phrase continually
18 comes up, Mr. Amaral, and I find it in Mr. Oprea's testimony.

19 A sense of responsibility seems to me to be a
20 psychological condition. I mean, you either feel a sense
21 of responsibility and do your work properly, or you don't.

22 Is that not psychological?

23 BY WITNESS AMARAL:

24 A I'm not sure that that's psychological in that
25 a sense of responsibility is something that you achieve with

1 maturity and not something you learn on the couch.

2 Q I'm sorry. I didn't quite follow that.

3 BY WITNESS AMARAL:

4 A Maybe I didn't follow your question.

5 Q Well, a sense of maturity produces a sense of
6 responsibility?

7 BY WITNESS AMARAL:

8 A Yes, sir.

9 Q It is not something you learn on the couch. Is
10 that what you said, "learn on a couch"?

11 BY WITNESS AMARAL:

12 A Either way.

13 Q Either way. Okay. I think I'll pass that one.

14 (Laughter.)

15 Yesterday, we were exploring --

16 Did you have something further to add, Mr. Amaral?

17 BY WITNESS AMARAL:

18 A Yes. I need to get closer to the microphone.

19 Q Yesterday, we were exploring with Mr. Oprea the
20 various things that Houston Lighting & Power is doing to
21 exercise more control and supervision under this option A,
22 the things that are laid out on pages 31 through 36 of his
23 testimony.

24 Now, we identified the following roles for HL&P
25 in relation to Brown & Root's quality assurance program:

1 Monitoring, changing, where necessary, increased programmatic
2 control, establishing overall objectives, analyzing problems
3 and trends, and maintaining overall project control.

4 These are all things that we discussed that
5 emerged from that prefiled testimony that HL&P is doing in
6 relation to Brown & Root's quality assurance program.

7 Do you consider this extensive involvement by
8 HL&P in the Brown & Root quality assurance program relieves
9 Brown & Root of quality assurance responsibilities?

10 BY WITNESS AMARAL:

11 A No, sir.

12 Q Is there so much involvement by HL&P that it
13 would be counterproductive to the Brown & Root organization's
14 sense of responsibility for quality assurance?

15 BY WITNESS AMARAL:

16 A No, sir.

17 MR. SINKIN: Mr. Chairman, that pretty much
18 concludes my questions for the Oprea/Amaral panel. I did have
19 one point of clarification that I need from the Chair.

20 I have some questions I want to ask Mr. Oprea
21 that I feel relate to the character of Houston Lighting & Power
22 that do not relate to the Oprea/Amaral discussion. But neither
23 do they relate to a specific panel topic that Mr. Oprea will be
24 addressing.

25 What I am looking for is how such issues will be --

1 We don't have a panel that says "Character" and so anything we
2 want to bring up on character comes up then. So it means
3 that to bring it up is to bring up something that is out of
4 the scope of what's going on at that particular time. But not
5 to bring it up means not to bring up character.

6 MR. REIS: Mr. Chairman, the Staff in preparing
7 its case and its cross-examination have looked to everything
8 in answer to the show-cause panel to deal with and what happened
9 in answer to the show-cause order and this panel as going to
10 character and that anything that is closely relevant to that.
11 I don't think you can go on any wild goose chases, and
12 character lends itself in some senses to go way outside
13 construction of the South Texas Project, which is what we're
14 dealing with here.

15 But anything that relates to that would go, we
16 think, the Staff believes, to this panel, and we have prepared
17 our cross-examination that way, also. We would have to know the
18 questions more exactly in order to comment more intelligently
19 on what Mr. Sinkin thinks. But we think it is relevant to
20 this panel, although not at this point to Mr. Oprea and
21 Mr. Amaral.

22 MR. SINKIN: I would agree that it is not relevant
23 at this point to Mr. Oprea and Mr. Amaral. But perhaps we
24 could just explore that. I don't want to tie up Mr. Amaral,
25 but I think something important has been said here.

1 Mr. Reis sees the context of the character being
2 brought up as a response to the order to show cause and
3 mentions the problems of the South Texas Nuclear Project.

4 I presume that the issue of character is not
5 strictly limited to the orders to show cause and its responses
6 and the construction of the South Texas Nuclear Project, but
7 that that panel, since it has been dealing with character,
8 will be the right place to bring up other issues that relate
9 to character.

10 MR. NEWMAN: Mr. Chairman, may I be heard?

11 JUDGE BECHHOEFER: Yes.

12 MR. NEWMAN: I would suggest that the Board at this
13 point not respond to general inquiries of this type. When
14 Mr. Sinkin or Mr. Hager asks their first question, the Board
15 will have before it then a matter upon which to rule, and we
16 can do it in a practical context. I don't believe that it is
17 useful to continue discussions about abstract questions.

18 JUDGE BECHHOEFER: Yes. I think -- I think it
19 would be better for you to. . .not at this time but ask questions,
20 and then if it is inappropriate to ask them at that time, I'm
21 sure we'll hear about that. And it is likely that that general
22 subject will have to enter this proceeding at some point.

23 MR. SINKIN: Well, one concern I had is that this
24 is a particular area, again, that I want to explore on future
25 cross-examination. Mr. Oprea is going to be handled by

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Mr. Hager, and I don't want to get in the problem of who is doing the cross-examining and have objections raised and like that. But I don't have the proper forum to raise the question at this time, apparently.

JUDGE BECHHOEFER: Well, the Board will permit you to ask specifically questions that are appropriate. We will permit you to ask them.

MR. SINKIN: Thank you.

JUDGE BECHHOEFER: I think before we get into Mr. Reis, I think we will take about a 15-minute break.

(A brief recess was taken.)

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End
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1 JUDGE BECHHOEFER: Mr. Reis.

2 MR. REIS: I have relatively few questions,
3 at this stage, of the panel.

4 BY MR. REIS:

5 Q Mr. Oprea, when did you first start talking
6 to Bechtel to enter into a study of the QA/QC matters at
7 the South Texas Project?

8 BY WITNESS OPREA:

9 A Sometime in January.

10 Q So it was after the December meetings with
11 the NRC?

12 BY WITNESS OPREA:

13 A Could I give some additional information to
14 what led up to the --

15 Q Surely.

16 BY WITNESS OPREA:

17 A -- Bechtel decision, Mr. Reis?

18 The decision took place, perhaps, on an expedited
19 basis after I had had my discussions with Region IV in
20 the latter part of December.

21 However, as early as about mid-year of '79,
22 I was thinking about an independent audit on the South
23 Texas Project.

24 Q Why were you thinking about that independent
25 audit in mid-'79?

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1 BY WITNESS OPREA:

2 A. Well, for several reasons. First, there was
3 an increase in the amount of activity on the project, more
4 and more construction activity.

5 I did pay attention to the different I&E Reports
6 in Region IV, and there had been cited several violations
7 in that time period, and as significant as any was the
8 fact that it was post-TMI.

9 We called TMI in early '79, and I thought that
10 perhaps there would be an exuberance on the part of NRC
11 to do a number of things different than they had in the
12 past; and what we wanted to do was some additional fine
13 tuning for quality assurance program.

14 So I had been thinking about getting an independent
15 audit on the project.

16 Q. So you had been aware prior even to the start
17 of the NRC inspection in November of 1979 that there might
18 be areas of problems at South Texas involving the quality
19 control/quality assurance?

20 BY WITNESS OPREA:

21 A. That's true, but I couched it in no kind of
22 different terminology than when I viewed the problems that
23 I knew other nuclear projects had.

24 There were commonalities of a sort, and I felt
25 that it was appropriate to move forward and get it on.

3
1 Q I see.

2 Now, you heard Mr. Amaral's testimony and
3 Mr. Goldberg's testimony that the problems were not such
4 that were being experienced by other utilities in 1979,
5 that they were the types of problems that were being experienced
6 earlier in that decade?

7 BY WITNESS OPREA:

8 A Well, Mr. Reis, I didn't get all of Mr. Goldberg's
9 testimony. I was just present for about an hour before
10 he left the stand.

11 I heard Mr. Amaral's testimony, and I'm trying
12 to get a feel for the thrust of your question.

13 Q Well, you talked about the problems that HL&P
14 was having, and you said they were common problems, but
15 they weren't common problems in the late '70's.

16 They were problems that were common earlier
17 in the decade.

18 I'm asking Mr. Oprea, Mr. Frazar.

19 BY WITNESS FRAZAR:

20 A I haven't said anything, Mr. Reis.

21 MR. AXELRAD: Mr. Chairman, I'm not sure that's
22 a proper characterization of what Mr. Oprea said in referring
23 to problems experienced by projects initiated in the early
24 1970's, which is, in essence, the type of project that
25 STP is.

1 WITNESS OPREA: Mr. Reis, would you mind restating
2 your question?

3 BY MR. REIS:

4 Q The question was, were the problems that HL&P
5 was having in 1979, those of the magnitude of those that
6 were being had by other utilities in the late '70's?

7 BY WITNESS OPREA:

8 A Throughout the latter part of 1979, specifically
9 when I got the late evening call from Region IV, I had
10 no reason to believe that our problems were any different.

11 We had some welding problems. We had some
12 concrete problems and other related problems; and I felt
13 that these were similar to what other projects had.

14 I placed no greater significance on them, other
15 than the fact that we did have some violations, non-compliances,
16 and I don't like them, either.

17 I'm always concerned about them. I like to
18 see these turned around quickly. I like to see the program,
19 in effect, controlled.

20 We now control the entire activity so that
21 we don't have a recurrence.

22 Q Mr. Oprea, to change the subject again, to
23 go to something else, you said generally -- and these are
24 some very general questions on the contract. That it is
25 a cost-plus fixed fee contract?

1 BY WITNESS OPREA:

2 A. Yes, sir.

3 Q. Is the fee dependent on how long construction
4 takes?

5 BY WITNESS OPREA:

6 A. No, sir.

7 Q. Now, the QA program that is called for is a
8 question of NRC regulations, and the QA program that is
9 called for by Appendix B, does it just cover quality assurance/
10 quality control matters, or does it permeate other aspects
11 of bring the South Texas Project home?

12 BY WITNESS OPREA:

13 A. It permeates other things, as well.

14 Q. And does it deal with design, as well?

15 BY WITNESS OPREA:

16 A. That's true.

17 Q. And procurement?

18 BY WITNESS OPREA:

19 A. Right.

20 Q. And construction?

21 BY WITNESS OPREA:

22 A. Right.

23 Q. Now, you mentioned before that there were changes
24 made to procedures after the show-cause order.

25 Can you be more specific on some of the procedures,

1 the specific procedures you've changed?

2 BY WITNESS OPREA:

3 A. Mr. Reis, I'm not that familiar with those
4 specific procedures because there are numerous procedures.

5 I was familiar with the fact that as a result
6 of the audit that was performed by Bechtel, and in fact
7 it was one of the first meetings that I had with Bechtel
8 after they started the audit, the message was clearly brought
9 to my attention that upper tier documents -- and these
10 are the quality assurance manuals and quality assurance
11 program management that represent the project were succinct
12 and to the point; but lower tier, which represents procedures
13 and such were somewhat complicated.

14 On the strength of that and through the balance
15 of the audit and the end results, it was obvious that we
16 had to get these procedures less complicated.

17 Mr. Frazar can talk more specifics, if you'd
18 like to do that.

19 Q. Now, as a result of the Bechtel audit and the
20 inspection report, I believe you testified that HL&P sent
21 more people to the field to observe the work from the QA/QC
22 organization? Is that so?

23 BY WITNESS OPREA:

24 A. Not as a result of the show cause. We did
25 that early in 1980 after my several meetings with Mr. Seyfrit

1 and his staff.

2 In early January 1980, I asked that we be represented
3 both with quality assurance personnel, as well as construction
4 personnel, and all safety-related activities and preplacement
5 planning, and also post-evaluation of what occurred; and
6 I set in at every one of them up to that point in time.
7 It was selectively done by our staff.

8 Q I see. This occurred because of your conversations
9 in December 1979 with Region IV of NRC?

10 BY WITNESS OPREA:

11 A Conversations and several evaluations that
12 we made, that we had felt that we had to take an extra
13 half-mile to make sure that we would have full coverage
14 and understand whether or not those problems, as identified,
15 indeed were inset type problems or not.

16 Q Did you change your -- After you received
17 79-19 and the show-cause order, did you change the scope
18 of your audits that HL&P performed with the Brown & Root
19 organization?

20 BY WITNESS OPREA:

21 A From the standpoint of frequency?

22 Q From the standpoint of frequency.

23 BY WITNESS OPREA:

24 A We had more frequent audits.

25 Q And the depth of the audits?

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1 MR. NEWMAN: Mr. Chairman, I've let the questioning
2 go on for a few minutes in an effort to determine where
3 Mr. Reis was going.

4 I do not see the relevance of this line of
5 questioning, for example, details as to auditing procedures
6 and so forth, as being relative to Questions 42 through
7 45.

8 That's obviously a matter that's considered
9 again in depth in the Oprea/Frazar panel, and I would think
10 it would be more appropriate for questioning at that time.

11 MR. REIS: I will defer. I think the objection
12 is well taken by the questioner.

13 BY MR. REIS:

14 Q Mr. Amaral, I think Mr. Oprea defined the programmatic
15 direction. Can you give us your definition of programmatic
16 direction?

17 BY WITNESS AMARAL:

18 A It's directed more towards establishing the
19 policy and the basic procedures and so on, the basic policy
20 by which the program would be implemented.

21 Q At the time of your audit and before, is it
22 your judgment that HL&P had adequate staff and experienced
23 enough staff to provide that direction?

24 BY WITNESS AMARAL:

25 A No, sir.

1 Q Will you please elaborate on that answer, sir?

2 BY WITNESS AMARAL:

3 A I believe I have before. I have indicated
4 that I felt that the quality assurance manager on the project
5 didn't meet the criteria that we had given the utility
6 for the quality assurance manager; and I also indicated
7 that at the quality assurance level, that should have been
8 the one that would have seen that the audits and other
9 problems were being evaluated for cause, via trending or
10 whatever analysis procedures you may have on your job.

11 I had indicated the shortcomings of the project
12 supervisor, project QA supervisor, as well as the QA supervisor
13 that was in the design office.

14 Q As a result of the most recent audit, do you
15 think they have sufficient staff now and competent enough
16 staff to provide programmatic direction?

17 BY WITNESS AMARAL:

18 A Yes, I do.

19 Q Mr. Oprea, has there been any breakdown in
20 the quality control/quality assurance program since 79-19?

21 BY WITNESS OPREA:

22 A I don't believe there was ever a breakdown
23 in the QA program. even including 79-19. I believe that's
24 stipulated in the show cause document received from NRC.

25 (Counsel reviews documents.)

-10 1 Q Did you report to the NRC on June 13th, 1980,
2 a breakdown in the quality program for the procurement
3 cycle of purchased materials?

4 BY WITNESS OPREA:

5 A I believe that we reported that we had a vendor
6 surveillance problem relative to the purchase of materials --
7 some purchases of materials for the project.

8 Q And you reported that two different times,
9 in June of '80 and in September of '80, as well?

10 BY WITNESS OPREA:

11 A I don't recall the actual times. I know we
12 did report them.

13 Q Uh-huh, and did you report breakdowns in other
14 areas, such as in coatings and paintings?

15 BY WITNESS OPREA:

16 A We identified the concern in those problem
17 areas; that is true.

18 Q And these were after 79-19 was issued?

19 BY WITNESS OPREA:

20 A I believe so.

21 MR. REIS: That's all I have, Your Honor, at
22 this time.

23 (Bench conference.)
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EXAMINATION

BY JUDGE LAMB:

Q Mr. Oprea, a few times during the testimony the involvement of Mr. Turner has been mentioned.

What was Mr. Turner's position at the time that Bechtel reported the decision to make that report?

BY WITNESS OPREA:

A Mr. Turner was vice president of power plant construction and technical services.

Q What was his role during the Bechtel report? What was his involvement?

BY WITNESS OPREA:

A Well, his role was really one whereby he did administer the quality assurance program. But the Bechtel audit was one that was conducted by Bechtel in answer to my office. So Mr. Turner got information that I conveyed to him based on conversations that I had with Bechtel that should there be ways that we can correct some of these concerns that they've identified in an expeditious way and not wait till the end of the audit, let's get on with correcting them.

That was the purpose of Mr. Turner's involvement.

Q But was he involved in the study itself; I mean in the HL&P side of the study?

BY WITNESS OPREA:

A The audit side?

1 Q Yes.

2 BY WITNESS OPREA:

3 A Not that I recall, sir.

4 Q How about Mr. Frazar's position?

5 BY WITNESS OPREA:

6 A Mr. Frazar was not involved other than to help
7 Bechtel in performing whatever they wanted to perform in the
8 audit of the quality assurance program.

9 Q Were either or both of those involved in the
10 decision to retain Bechtel?

11 BY WITNESS OPREA:

12 A No, sir.

13 Q Did they make recommendations as to whether
14 Bechtel or someone else should be retained?

15 BY WITNESS OPREA:

16 A Mr. Turner submitted a list several months in
17 advance of our decision to go forward with Bechtel that
18 consisted of several other organizations. I reviewed those
19 against concerns that I had and several others that I put
20 together, and, finally, in January I had the revelation to
21 go ahead and move forward with Bechtel.

22 Q I believe I recall from earlier testimony that
23 Mr. Frazar was not present at the initial meeting with Bechtel.

24 BY WITNESS OPREA:

25 A Not as I recall.

1 Q Why wasn't he?

2 BY WITNESS OPREA:

3 A It was an audit, an independent audit that was
4 called by management, and I didn't feel there was a need for
5 him to be present.

6 Q You've heard at several points over the past
7 two or three days of many aspects of Mr. Amaral's diagnosis
8 of the problem. I'd like to explore with you on a confere[n]tial
9 basis or have you explore with us in a confere[n]tial fashion
10 whether you agreed with that diagnosis, and if you disagreed,
11 in what respects.

12 BY WITNESS OPREA:

13 A Well, sir, I would say that I, in the final
14 analysis, did agree. At the outset, I think I identified
15 somewhat generalistically yesterday that when I brought
16 Bechtel on board that we had thoughts about other than what
17 the recommendation ultimately we received from Bechtel
18 represented organizationally.

19 I think I also indicated there were times that
20 in discussions I had with our president, Mr. Jordan, that
21 there was thoughts of third parties.

22 And as a result, we did not have a mind set
23 relative to what we would like to see take place, but we were
24 looking at options that we thought that perhaps would give
25 that that sense of change. Everybody looked at is there a

1 need for change, and change is always the most dramatic
2 significant physical thing that people respond to in regard
3 to organization. And as we got the recommendations from
4 Bechtel and as we reviewed them, as I indicated yesterday,
5 over a period of time, both with them, collectively, as well
6 as independently on my own and in conversations with our
7 president from time to time, we finally narrowed this down
8 that indeed option "A" is the best approach.

9 And so what he, in essence, did based on his
10 recommendations and based on what we did in reviewing it with
11 he and then finally when we got Mr. John Jackson from MAC
12 on board to help us review it, I guess you might say they
13 turned us from what we thought to be the way to go to where
14 we are today. And I'm still convinced that that is the best
15 system for South Texas.

16 Q All right. Actually, I had planned to ask you
17 that question, too, but the question that I really asked you
18 or intended to ask you was one that predates that one as to
19 the extent to which and the specifics of any disagreements
20 that you might have had with the diagnosis of the problem
21 itself as to what was wrong with the program at the time of
22 the Bechtel report.

23 BY WITNESS OPREA:

24 A Well, what was wrong was not organizationally.
25 Based on the conversations I've had with Mr. Amaral and his

1 staff during the course of the audit and then finally the
2 final report, it was obvious that there were causes that
3 had to be corrected, and it was also an unfortunate situation,
4 as I identified earlier, that most people were involved in
5 looking at symptoms and trying to cure the symptoms instead
6 of looking at the very base reason or why symptoms existed.
7 And it was identified in the audit that we had some basic
8 causes that had to be corrected, and these causes indeed
9 were absolutely problems.

10 Q You mentioned that the problems were not
11 organizational, did you say?

12 BY WITNESS OPREA:

13 A I don't believe that the problem can be totally
14 identified. There are different ways of structuring an
15 organization to get the maximum degree of responsiveness
16 and perhaps end results. But I'm convinced that had we not
17 been involved in the curing of problems but looking at the
18 causes and how to cure those, that a lot of what has occurred
19 would not have.

20 Q Mr. Amaral, did I understand you to say that you
21 felt that some of the problems initially was organizational?

22 BY WITNESS AMARAL:

23 A What I attempted to do initially was to separate
24 the alternatives as structures and indicate that there were
25 some organizational problems. And I described those problems

1 as that long communication chain, for example, that you needed
2 to go through to get information back to management or to get
3 instructions to the man on the job. He was pretty well
4 isolated.

5 Q That's what I had recalled.

6 You don't believe that was a problem, Mr. Oprea?

7 BY WITNESS OPREA:

8 A Excuse me, Judge Lamb. When you were talking
9 about organization, I thought you were talking about the
10 structure of the quality assurance/quality control organization,
11 option "A" versus "E".

12 You are talking about management visibility,
13 the attitudinal results.

14 Q I'm talking about the causes of the problems,
15 which led to the show-cause order, which led to the issuance
16 or brought about the show-cause order.

17 BY WITNESS OPREA:

18 A Well, part of it was the (inaudible) effect, as
19 we call it, for certain organizational members, and I guess
20 that did contribute to the problem. But I was looking at the
21 broader based organization that was on the site.

22 Q Now, with respect to the recommendations on
23 personnel, did you disagree with Mr. Amaral's recommendations?

24 BY WITNESS OPREA:

25 A I don't know whether I disagreed or agreed because

1 I asked for further evaluation on the basis of performance.

2 I believe you are talking about the HL&P and B&R personnel?

3 Q Right. QA/QC personnel.

4 BY WITNESS OPREA:

5 A Right. Those evaluations were made on the
6 basis of resumes and not necessarily an objective evaluation
7 based on performance. So we factored in performance, as well,
8 along with the resume evaluation. And as we indicated
9 yesterday, there have been modifications needed to the
10 organization. People were moved in different areas. Some
11 were transferred out of QA/QC.

12 Mr. Wilson, in particular, was taken from the
13 site supervisor into a discipline supervisor answering to the
14 site QA manager.

15 So in many instances we agreed with them. In
16 other areas, what we did was take the people out, give them
17 additional training, and keep them in a level that was more
18 in keeping with their capabilities.

19 Q Again, though, my question predates that somewhat.
20 I'm asking you whether you agreed with his assessment of
21 certain shortcomings in the QA/QC personnel within the
22 organization.

23 BY WITNESS OPREA:

24 A Oh, I believe we had some shortcomings, yes, sir.
25 I don't know how in depth they were.

1 Q Well, you have heard Mr. Amaral's testimony.
2 Do you have any difference with his assessment?

3 BY WITNESS OPREA:

4 A No, sir. I don't have any disagreement with it.

5 Q With respect to management analysis of activities
6 at STP, that is, whether that was adequate before the show-cause
7 order -- I believe I'm characterizing Mr. Amaral's testimony
8 correctly when I say that there was not any at that time.

9 Would you agree with that?

10 BY WITNESS OPREA:

11 A Well, I guess the word "adequate" is somewhat
12 a questionable word. If the management knowledge is directed
13 towards me in regard to what my involvement was during the
14 period preceding the show-cause, I received audit reports that
15 came in with regards to audits, I got copies of I&E reports,
16 and Mr. Turner kept me informed as appropriate on issues
17 that he felt were significant. I felt I was adequately
18 informed in regard to things were taking place in the project
19 and felt that the project was performing in a normal line,
20 other than the fact that we had some violations that I didn't
21 like.

22 I don't like anything that is negative in regard
23 to what the project can do. I was really concerned about
24 being able to zero in on the solution to those problems.

25 That was the degree of my involvement. However,

1 after discussions with Mr. Seyfrit of Region 4 in late
2 December, I have been closely involved every since even
3 before the balance of my duties were reassigned to other parts
4 of the organization in mid-year 1980, which at that time I was
5 totally involved and assigned to the nuclear activities of
6 the company.

7 Q What I'm asking for, really, is a retrospective
8 analysis of the extent to which your knowledge was adequate
9 before the show-cause order. In view of the things which you
10 have learned since then and looking back at that from this
11 perspective, do you feel that that was adequate?

12 BY WITNESS OPREA:

13 A Yes, sir. And let me tell you why. I felt that
14 I was kept adequately informed of the problems over the
15 ensuing two-year period prior to show-cause, and I really had
16 as late as December of 1979 and I didn't feel that there were
17 any unusual activities other than the fact that things were
18 happening that were problematic.

19 When I reflected back on several I&E reports we
20 received as late as October, 1979, and those reports, in
21 essence, indicated that there were not significant problems,
22 that, in addition, fortified my belief that we had a program
23 that was moving across normal lines and would not fail. Two
24 months or three months later I found out we had some drastic
25 problems.

1 I was dumbfounded, as I indicated, I believe,
2 yesterday, when we got the show-cause order that went into
3 such great depth. I knew as a result of that investigation
4 and also the exit interview that took place, I believe, in
5 late January, 1980, that there were a series of non-compliances
6 that had been identified. But when we finally got the show-cause
7 in addition to non-compliances, the show-cause letter and the
8 penalty and all these other things, I was completely
9 overwhelmed with the fact that how can a project change in
10 a scant two or three months from October to the end of December,
11 because my perception was that the project had problems, like
12 other projects had problems; we were identifying these; there
13 were things that we were doing. We were getting ready to take
14 an independent audit on the QA/QC, because, as I mentioned
15 earlier, we were looking at the organization and the timing to
16 do it.

17 Of course, what happened at the end of 1979 expedited
18 a number of things.

19 Q Your response suggests to me that you did not
20 know of some of the problems that existed at that time,
21 because you and Mr. Jordan both have said that you were
22 dumbfounded when the show-cause order arrived.

23 BY WITNESS OPREA:

24 A Well, in order to answer your question, Judge Lamb,
25 let me say that I didn't know about some of the problems. I

6-11

1 did know about some of the problems that apparently NRC
2 allegedly uncovered in their investigation. Up to that point
3 in time, I knew about certain intimidation and harassment
4 problems over a period of three years. They were separated
5 in time by anywhere from, say, several months to half a year,
6 or sometimes they were a little more compressed in short time
7 frames, and our people took after them. Like, in, I believe
8 it was late or middle '79 there was a case of some harassment
9 or intimidation just about the time that NRC went through
10 their mid-term audit of the QA/QC program, and our people
11 handled that.

12 NRC said we did it in a proper manner, and they
13 felt that there would be no further recurrence.

14 These are all the things that I've used as a
15 measure based on the feedback that I get from our people, as
16 well as the independent outside expressions that came from
17 the NRC. We had a program that, yes, had some problems; we
18 would solve them. Projects are made out of people. People do
19 have some anomalies from time to time. And that was the
20 purpose of a QA program, to try to adapt to those and try to
21 change them.

22 Q Of course, what I'm having difficulty with is
23 the Commission has specifically instructed the Board to look
24 at that question, among others.

25 That seems to disagree with Mr. Amaral's testimony;

8-12

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1 is that correct?

2 BY WITNESS OPREA:

3 A I don't believe that I had any disagreement.
4 Maybe I've gone a little more in depth and he wasn't privy
5 to my thinking or my feelings. That might account for what
6 the difference is.

7 Q I guess I'm attributing to Mr. Amaral the
8 statement that management prior to the show-cause order was
9 not sufficiently knowledgeable of the details of the STP
10 Project.

11 Is that correct, Mr. Amaral?

12 BY WITNESS AMARAL:

13 A Yes, sir.

14 Let me explain. The kind of information that
15 Mr. Oprea was receiving was the I&E reports from Region 4
16 which indicated no fault. He was receiving occasional audit
17 reports from his own organization that indicated no real
18 problem. He was getting information on some specific problems
19 that were occurring.

20 What he was not getting was that there were a
21 lot of problems and that they were building up, they were
22 being saved, and he was not getting the causes, the real
23 causes, the root causes. What he received was the -- is the
24 cause that was necessary to dispense with the remedial rather
25 than the long-term preventative action.

1 Q Do you agree with that, Mr. Oprea?

2 BY WITNESS OPREA:

3 A I believe that's a fair assessment, yes, sir.

4 But what I wanted to do, Judge Lamb, is to assure you and the
5 other members of this Board that there had been management
6 sensitivity from the very beginning of this project to
7 quality assurance measures. QA/QC activities have always
8 received the full support of management.

9 I've been sensitive because I aided the development
10 of that program in the early days, as I alluded to yesterday,
11 when Manny Musing was the NARR and he was moving hard and
12 strong in formalizing a real good quality assurance program,
13 and he did that with a series of seminars and meetings with
14 the industry, which I attended every one, and had meetings with
15 Manny Musing in regards to the program, and he identified the
16 program by these different colored books that we referred to
17 as the orange, the green, what have you.

18 And I've always been sensitive to it. I've been
19 involved in it. I've encouraged better performance, and
20 every time I've visited on site I would meet with our QA
21 people and discuss with them anything that they wanted to
22 discuss with me; ask if they had problems; how things were going.
23 Many times I walked in on them when they had NRC auditors or
24 inspectors on site.

25 So it is not one of lack of sensitivity. I think

1 what it amounts to or what Mr. Amaral talked about earlier
2 today and the last several days is there was a very, very
3 definite lack of what appeared to be physical visibility of
4 management and in work. Maybe I didn't show up as frequently
5 as I should have on site to talk to people and to converse
6 with them in regard to their problems.

7 The attitude that they have received because of
8 not seeing me around was one that management was not involved,
9 management was not sensitive, management did not have this
10 attitude of supporting it where they should, and that is
11 contrary to my basic belief and what I really, truly represent.

12 Q See, that's what I'm trying to get into, sensitivity
13 to the project. What I was really trying to do was address
14 that specific question as to whether you really knew enough
15 about what was going on in the project at that time for the
16 good of the project.

17 BY WITNESS OPREA:

18 A I did know enough about all the details, and
19 that is in essence what Mr. Amaral was getting at, the details
20 that related to the buildup of the causes.

21 Q Do you feel you do now?

22 BY WITNESS OPREA:

23 A Yes, indeed.

24 Q What has happened to bring that about?
25

1 BY WITNESS OPREA:

2 A Well, I have spent -- Since June of last year
3 I've spent all my time on nuclear issues. I've spent a number
4 of my days visiting the site. Unfortunately, the last several
5 months, because of -- I mean weeks, because of preparation for
6 this forum, I have not been able to get on site as frequently,
7 but I've tried to get down at least once a week.

8 And I talk to people on site. I have meetings
9 with our QA/QC people on site individually and collectively.
10 I have a number of communications with Mr. Frazar. I read
11 every audit report that I get from Brown & Root, including
12 corrective action requests, as well as audit reports that come
13 from my people, and when I read something that doesn't seem
14 right, I ask questions about them. I send notes back and
15 expect responses. I get copies of the trend analysis reports,
16 and I ask questions about what I see as what might be an
17 indicator, if there are any, of the potential problems.

18 I think I'm involved enough both from the standpoint
19 of the quality assurance end of it, as well as the physical
20 aspects of the project. I think I've mentioned I talk to people
21 on site. When I get down on site, I walk through the project.
22 I talk to workers, Brown & Root workers, HL&P workers doing
23 their thing out on site and discuss what they are doing and
24 convey to them the need for openness and understanding and
25 truthfulness and absolute cooperation on the part of everybody

1 down there to make that project a one hundred percent
 2 successful project.

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1 Q Mr. Amaral, do you agree that Mr. Oprea's expertise,
2 that management, now in the form of Mr. Oprea, is now involved
3 sufficiently?

4 BY WITNESS AMARAL:

5 A Mr. Oprea's present attitude is really not
6 significantly different from the attitude that he had before
7 with respect to his wanting the best for his project.

8 The attitude that he demonstrates and the action
9 that he has taken with respect to responding to our input to
10 the South Texas Project is very gratifying, and I certainly
11 agree with you.

12 Q Do you feel that all of the Bechtel recommendations
13 have been implemented, Mr. Oprea?

14 BY WITNESS OPREA:

15 A Judge Lamb, if I recall, we made an assessment of
16 that a couple of weeks ago. I believe we lack about 10 or 12
17 of the recommendations.

18 These are based on the finding. The over-all
19 recommendations have been implemented with the exception of
20 one or two, one that pertains to the matrixing of the procedures,
21 and that will take place when we finish the procedures, which
22 I believe is supposed to be just about like this week, and
23 then the matrix will take form.

24 There might have been one or two others that we may
25 have had to modify, but for the most part everything that has

7-2
1 been recommended, both in strong recommendations and in findings
2 that they have presented to us, have been implemented and
3 corrected, and with Bechtel's understanding of what we're
4 doing, we've passed these findings, and we might have just a
5 few outstanding at this time.

6 Q Does your assessment of that agree, Mr. Amaral?

7 BY WITNESS AMARAL:

8 A That is correct, sir.

9 Q Incidentally, you mentioned at some point a
10 recommendation concerning the use of psychologists. Was this
11 actually done?

12 WITNESS OPREA: Do you want me to answer that?

13 BY JUDGE LAMB:

14 Q Yes.

15 BY MR. OPREA:

16 A We have used a tem-building approach, and we have
17 done that with the various levels of management. I don't know
18 how far Brown & Root went on this concept beyond that. I know
19 Brown & Root has a quality improvement program that reaches
20 down into the very bowels of the organization. That is not
21 quality assurance/quality control. It's a concept of quality
22 that permeates the organization, and it goes from the top
23 management all the way down through the organization through
24 supervisors, who are in turn supposed to convey this and work
25 with their respective team members or groups.

7-3
1 But the extent of how far Brown & Root has gone,
2 I believe ought to be discussed with Mr. Broom.

3 But we did use a team-building for our people as
4 well as the mixture of Brown & Root and HL&P personnel down
5 the chain.

6 Q Was that what you had in mind, Mr. Amaral?

7 BY WITNESS AMARAL:

8 A Yes, sir. I believe that is still occurring.

9 Q So that was fulfilled as well, or is being fulfilled?

10 BY WITNESS AMARAL:

11 A Yes, sir.

12 Q We discussed questions yesterday, or asked questions
13 concerning the level at which QA management -- QA manager
14 reports, and probably we will be discussing this some more,
15 but I wonder if you could share with us your thoughts in
16 making the decision to have it work the way it's working now;
17 would the QA manager report directly to your level?

18 BY WITNESS OPREA:

19 A Well, I thought it was quite obvious the reason for
20 that was in order to give correct visibility first to the
21 quality assurance program, both for HL&P and Brown & Root on
22 site, but more importantly for the organization to recognize
23 that executive management of our company is heavily involved in
24 quality, that we support it, and that there will be an over-
25 sight position that comes to my office to assure that the

7-4
1 program is working properly and is strengthened and is doing
2 the job as expected to do in support of Appendix B.

3 JUDGE LAMB: I asked that to get that answer into
4 the record.

5 Thank you very much.

6 BY JUDGE BECHHOEFER:

7 Q. Mr. Oprea, yesterday there was testimony, I believe,
8 about the process by which Bechtel was selected to do the
9 independent study.

10 What does independent -- what does independence
11 mean to you? Organizational independence, or would you take
12 into account other factors? Just what did independence mean
13 to you?

14 BY WITNESS OPREA:

15 A. It meant a complete third-party review of the
16 South Texas quality assurance program from that organization
17 or individual, who are not involved in any measure with the
18 South Texas Project.

19 Q. Did you take into account involvement in similar
20 types of projects?

21 BY WITNESS OPREA:

22 A. You mean that they might be involved in with HL&P?

23 Q. Not with HL&P but with other companies.

24 BY WITNESS OPREA:

25 A. The best way that I can kind of go through this,

7-5
1 Judge Bechhoefer, how I got to the decision to go with Bechtel,
2 perhaps might be of some benefit to the Board.

3 Q Right. This is what I was going to try to ask.

4 BY WITNESS OPREA:

5 A As I said earlier, it was about mid-year of '79
6 that I felt very strongly that we needed to look forward
7 because of the circumstances that represent the three areas
8 that I mentioned earlier, the added amount of activity, the
9 Three Mile Island incident, plus the observation of several
10 violations that the project had been cited for, and I felt it
11 was timing at this particular point that it was sort of a
12 turn of the road for the project, because it was moving upward
13 with a lot more work to be faced by the project in the future
14 months to get an independent audit.

15 I recall asking Mr. Turner if he could get some
16 names for me and check around in the industry and get some
17 names for me relative to consultants, and over a period of
18 several months he developed two, three, maybe four names, and
19 several others that I came across in discussions I had, and
20 as we got closer and closer to the end of year, of course, I
21 guess the triggering device as far as moving forward was the
22 meetings I had with Carl Seyfrit, who is the Director of
23 Region IV of I&E in Texas.

24 After I had those meetings I kept thinking about
25 that we needed to have some of these problems that they had

7-6 1 indicated to be destroyed by the need to move forward and to
2 go ahead and get this out of the way, and I really wanted to
3 find out whether we had any problems.

4 But in looking at the conditions of various
5 organization, I've always been concerned about consultants
6 that don't have what I call hands-on, in-depth experience,
7 present day hands-on, in-depth experience and an awareness of
8 what's going on and what has to be done.

9 And the more I thought about it and I looked at
10 consultants that have -- maybe some people worked in engineering,
11 some had been QA specialists all their lives, and maybe some
12 have had limited physical awareness or physical relationship
13 to these problems by actually being involved, and some of them
14 might be related to, as we call it, textbook consultants, and
15 I was concerned and I was not looking for a technical solution,
16 I was looking for a practical solution, a practical evaluation
17 as to whether or not we indeed had a problem, because is the
18 problem is the interface between quality assurance and all of
19 those things that make up the physical activities on a project,
20 the procedures, the construction activities, the people, the
21 organization, et cetera.

22 So I remember I muddled over this for a long time.
23 I'd look at that list. I'd make a few phone calls and I just
24 didn't feel comfortable with the list.

25 And I remember I was in Washington, and I forget

7-7 1 what the purpose was now, and I was at dinner and I was
2 sitting there thinking about it and it finally dawned on me,
3 why in the world don't you try to get somebody to audit the
4 project that's been there before and that is there now, that
5 has had a lot of experience, that understands the engineering,
6 the construction, the quality assurance issues, that under-
7 stands how the manifold 10 CFR 50, Appendix B, serves as the
8 umbrella for quality assurance on a project.

9 So on the strength of that, I remember going back --
10 when I got back to Houston I went through a series of documents
11 that I had that related to A&E contractors and the amount of
12 work they had performed, and I remember specifically looking
13 at every A&E contractor that built and designed nuclear power
14 plants.

15 That included the involvement of Daniels. It
16 included what Brown & Root was doing. It included what
17 Bechtel was doing, Stone & Webster, EBASCO.

18 I looked at the numbers. I looked at the work,
19 when they started and when they ended up and what they're
20 still doing, and it was obvious to me, I said the organization
21 with the greatest track record, the greatest involvement and
22 perhaps with the greatest mix of different types of activities
23 that related to nuclear power was Bechtel.

24 And on the strength of that, I remember talking to
25 Don Jordan and telling him that I think I'm gong to go ahead

7-9
1 and get Bechtel to run an audit on this project.

2 We discussed it and I remember making a phone call
3 in January -- I don't know exactly when -- to the local vice-
4 president in Houston, Jack Fidel, and I either then talked to
5 the president of the power group, Harry Reinch with Bechtel
6 about them doing this, and I perceived perhaps a degree of
7 lethargy regarding wanting to do it, because many of these
8 contractors don't like to get caught in a vice of where people
9 might say you're in conflict with another A&E contractor.

10 I tried to assure them that we were not looking at
11 the proprietary things that relate to how Brown & Root does
12 everything.

13 We wanted to zero in on a quality assurance program,
14 and strictly quality assurance and not necessary construction
15 techniques, design techniques, control techniques, and so forth,
16 but to look at the make-up of the quality assurance program and
17 just what are we doing right or what are we doing wrong and
18 what should we do to make sure that we don't have what might be
19 the makings of problems, if the perception I had from Region IV
20 was correct.

21 On the strength of that, Mr. Amaral and several
22 others showed up in my office for an arranged agreement on the
23 20th, or thereabouts, of January. We discussed it. We went
24 back and reviewed the broad charge that was given to them,
25 which in essence was to give an over-all review of the QA

7-9
1 program, outside from top to bottom, no holds barred. I wanted
2 to find out whether or not we had any problems, and if so, what
3 are they and what are we going to have to do to correct them.

4 At the same time I mentioned that in the process
5 if you see something organizationally that you ought to bring
6 to my attention, bring it to my attention. I want to be
7 sensitive to any issue that you think is sensitive.

8 Then they came back sometime in February, and that
9 is what I guess you might call generally the kick-off meeting,
10 and we decided, yes, they will move forward on it, they'll
11 take it on, and they came on site in a few weeks and went on
12 with the audit.

13 That basically is how it happened.

14 Q. All right. Now, so I take it that -- I'll just
15 name a company, but consider it not insofar as the company is
16 concerned but insofar as the type of company -- I take it you
17 rejected companies or firms like Arthur D. Little, and again
18 I just use that as an example, because of the lack of hands-on
19 experience?

20 BY WITNESS OPREA:

21 A. Present day hands-on experience, yes, sir. That
22 was my real concern, because I wanted to get a realistic
23 present day evaluation.

24 I've had people before come in and tell me that
25 these are the regulations and this is how you conform with

7-10
1 these regulations, and I've always had a concern as to are they
2 speaking from a cross-section of exposure that they've had,
3 are they speaking from an individual prerogative, or are they
4 speaking because they've been there before, that they've gone
5 across a trip wire and things have happened when they did that
6 and they had to take certain actions.

7 I felt, based on our final evaluation, that Bechtel
8 has gone across those trip wires in the past. I'm sure that
9 they've had problems and they probably still have problems in
10 some of their projects, but I felt that the wealth of knowledge
11 that came with 30 to 40 nuclear projects was something that
12 could be highly beneficial to the evaluation of our QA/QC
13 programs.

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1 Q Did you take any consideration or give any
2 consideration to the fact that involvement in nuclear projects
3 of this sort might in itself assure a particular answer,
4 irrespective of what that answer would be to the optimum
5 form of organization?

6 In other words, does the mere fact of involvement
7 have any effect on whether this company is actually independent?
8 I'm using independent in a very broad sense.

9 BY WITNESS OPREA:

10 A I don't understand. "The mere fact of involvement
11 gives you the assurance of independence"?

12 Q What I'm trying to ascertain is whether choosing
13 a company -- and I won't even say Bechtel; a company like
14 Bechtel or like EBASCO or like Stone & Webster -- almost
15 guaranteed that a given answer would result?

16 This is irrespective of the fact that you may
17 have even from Houston's point of view have been leaning
18 toward another answer.

19 But does the selection of a company like Bechtel
20 almost ensure that the given answer would be the final
21 result?

22 BY WITNESS OPREA:

23 A I didn't feel that was the case. What I knew
24 of Bechtel's involvement in dealing with the industry and
25 their success over the years in various nuclear projects,

1 I was looking for an open objective type of evaluation.

2 I really felt that they would give me the benefit
3 of the mixture of all those types of organizations and
4 activities that they've been exposed to and that they've
5 been knowledgeable of; and to be quite frank, what came
6 out of this audit and what came out of the recommendations
7 fortified my conviction that they would do this in an objective
8 open way.

9 Q Well, what I was trying to ascertain was whether
10 if you had approached a different type of organization,
11 you might have had a much more -- a tendency, for instance,
12 to approve third party participation to a greater degree.

13 That might well have been more prevalent.

14 BY WITNESS OPREA:

15 A Well, that's speculation and I really can't
16 say that would materialize as such or not. I guess that
17 would be a risk one would take if you went to somebody
18 else.

19 Q Well, perhaps Mr. Amaral would like to comment
20 on that last series.

21 BY WITNESS AMARAL:

22 A I think that would depend on the particular
23 consultant that you've drawn into the act of making that
24 decision.

25 Some consultants are very strong in their

-3 1 convictions of how something should be organized, but there
2 are very few consultants that have had the experience with
3 nuclear powerplants, this kind of thing that we're talking
4 about here.

5 Most of them, the better consultants, have
6 been involved with manufacturing plants, automobile plants,
7 places where the consulting atmosphere is more of an acceptable
8 one, because they depend upon that kind of judgment.

9 Q Well, is it likely that Bechtel -- or do you
10 think Bechtel, or could you have reached conclusions --
11 Could any fact have been presented to you where you would
12 have thought the greater third party involvement was warranted?

13 By "third party," I mean other than Houston
14 or Brown & Root?

15 BY MR. AMARAL:

16 A Given another situation. Let me explain how
17 we assemble our teams so that you understand that we reach
18 for as much objectivity as possible, also.

19 I brought together the people with the best
20 potential for performing this kind of audit. Also, I brought
21 on board an individual who had a great deal of experience
22 in these kinds of problems, one that had been dealing and
23 is dealing currently almost on a daily basis with the
24 Commission with respect to what events occurred at TMI,
25 what events occurred at Indian Point, at Zion, at Marble

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1 Hill.

2 We had all that experience brought to our study
3 and that, I thought, was valuable and overwhelming experience.

4 Q Now, turning to a different aspect of the same
5 question, in terms of -- I think Mr. Oprea stated that
6 the criteria themselves were developed in consultation
7 between you and Bechtel; is that correct?

8 BY WITNESS AMARAL:

9 A Yes, sir.

10 Q I was wondering whether several of the criteria
11 themselves didn't almost assure that a given answer would
12 result?

13 The one I will refer to is the -- Well, start
14 with the most obvious, No. 5, page 36.

15 If a criterion states that one of the objectives
16 is to use existing personnel in the system wherever possible,
17 does not that in itself almost assure that a given answer
18 will result?

19 BY WITNESS AMARAL:

20 A That's an almost textbook answer, that the
21 guidance or leadership that the quality assurance person
22 has in establishing the quality assurance organization
23 is to look at what you have in place that is working, and
24 attempt to salvage what is working, rather than to throw
25 it out. As they say, throw the baby out with the wash

1 water.

2 Q Were variations such as throwing everybody
3 involved in QA and QC out and starting over again, was
4 that considered at all, or was that precluded by Criterion 5?

5 BY WITNESS AMARAL:

6 A Yes, that certainly was considered and that
7 is reflected in some of the alternatives and our response
8 to some of the alternatives.

9 Q Now, the existence of Criterion 5, and I'd
10 ask both of you, assuming before the study came out, with
11 Criterion 5, if that's what you were looking for, would
12 that almost certain determine that A would have to be chosen,
13 or organization of Form A?

14 BY WITNESS AMARAL:

15 A Criterion 5 wasn't the overwhelming criterion.
16 We needed to consider them all and measured them in the
17 given circumstance or alternative.

18 Q So you did not require that each of these five
19 criteria be attained in equal measure?

20 BY WITNESS AMARAL:

21 A No, sir.

22 Q In order for your final selection?

23 BY WITNESS AMARAL:

24 A Given a set of circumstances that would have
25 changed that, it would have been changed.

-6 1 Q So that if you had determined that even though
2 it might be theoretically desirable to use the personnel,
3 if you had determined that existing personnel could not
4 handle the situation, you would have felt free to recommend
5 that existing personnel not be used?

6 BY WITNESS AMARAL:

7 A Exactly.

8 BY WITNESS OPREA:

9 A Judge Bechhoefer, Criterion 5 could be equally
10 applicable, not only to A, but to B and E. So it's not
11 just applied solely to Option A.

12 If Criterion 5 was going to be invoked to use
13 as a grading against the criteria, it could have been involved
14 just as readily in Option B.

15 Q Yes. I would like to ask, also, does Criterion
16 2, which is constructor's responsibility for quality --
17 that, I take it, could be taken into several of the options?

18 BY WITNESS AMARAL:

19 A That's correct. There again, that is not an
20 axiom that was invented by the nuclear business. That's
21 a truism that has been long established in quality assurance.

22 (Counsel reviews document.)

23 Q To the extent that construction responsibility
24 for quality might be lessened by any option, would that
25 be disqualified for that option? I should say, not eliminated,

1 but lessened? Or either one?

2 MR. NEWMAN: Mr. Chairman, I was unable to
3 hear the question myself. Could you repeat it?

4 JUDGE BECHHOEFER: Yes.

5 BY JUDGE BECHHOEFER:

6 Q To the extent that the construction responsibility
7 for quality might be lessened by any of the options, my
8 question to both gentlemen was whether that would eliminate
9 that option in itself?

10 BY WITNESS OPREA:

11 A Let me respond first, if I might, Judge Bechhoefer.

12 I would say what we were applying in this criteria
13 is the risk assessment in regard to whether or not the
14 doer responsibility was diminished any under which option.

15 And you're talking about degrees. I think
16 that once you have a weakening viewpoint, that if indeed
17 you have the doer responsibility not fully embraced in
18 any construction organization, then you have the tendency
19 here to look at greater problems ensuing because of that.

20 Therefore, I would eliminate it. I would say
21 that automatically would cast a doubt or a suspicion on
22 the highest level of success for that option.

23 BY WITNESS AMARAL:

24 A I would concur with that.

25 (Board reviews document.)

-8 1 Q Mr. Oprea, you answered a question to Dr. Lamb
2 concerning the extent to which you go to the site and speak
3 with the various people.

4 You mentioned workers. How far down the line
5 do you normally get in terms of talking to workers or anyone
6 else on the site?

7 BY WITNESS OPREA:

8 A To the crafts, to the people who are the doers,
9 and depending on who is around.

10 Q Supervisors only?

11 BY WITNESS OPREA:

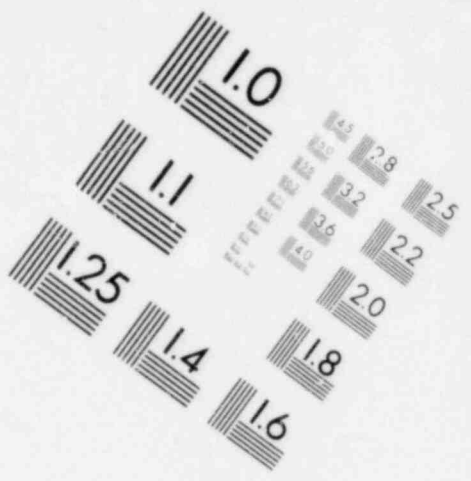
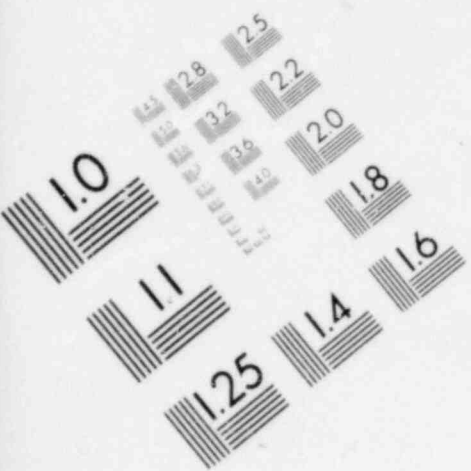
12 A No, sir. No, sir. I'm talking about the actual
13 craft journeymen or perhaps apprentices.

14 As an example, a few weeks ago when we were
15 walking through the Mechanical Auxiliary Building to look
16 at some of the AWS welding, I walked over to a team that
17 was working.

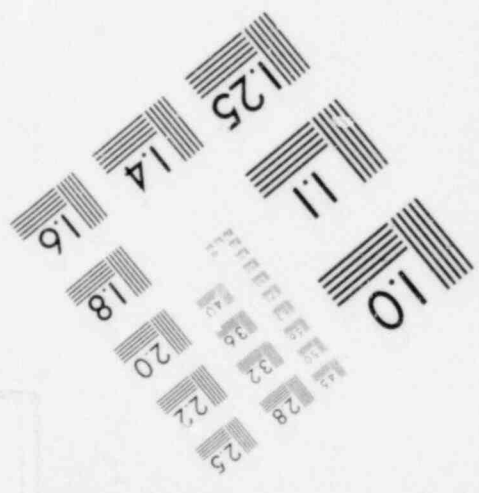
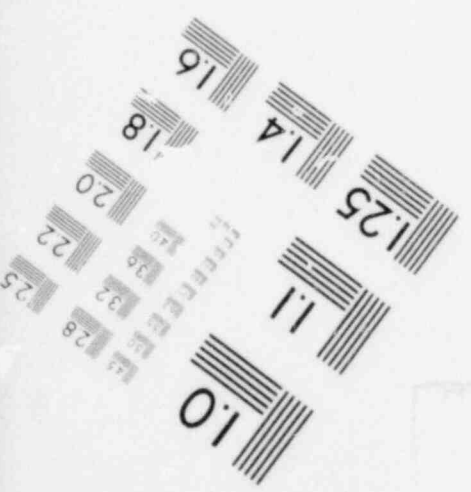
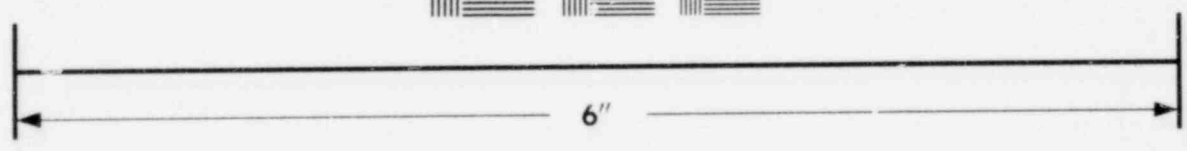
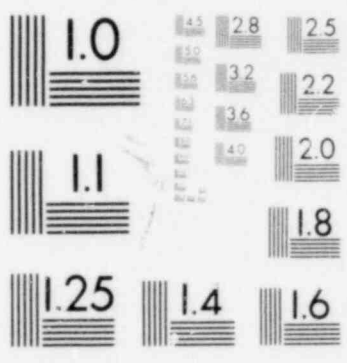
18 He had inspectors, he had the welder, and I
19 guess he had a helper. There were about three or four
20 people there.

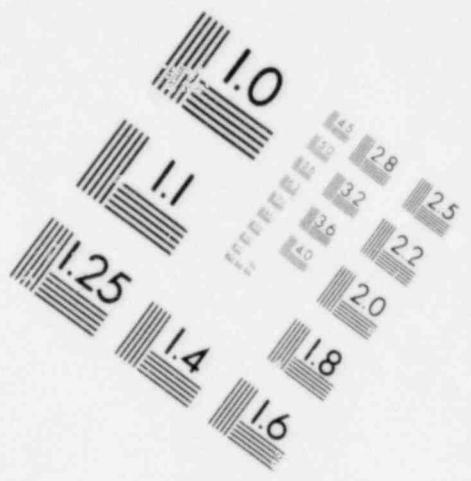
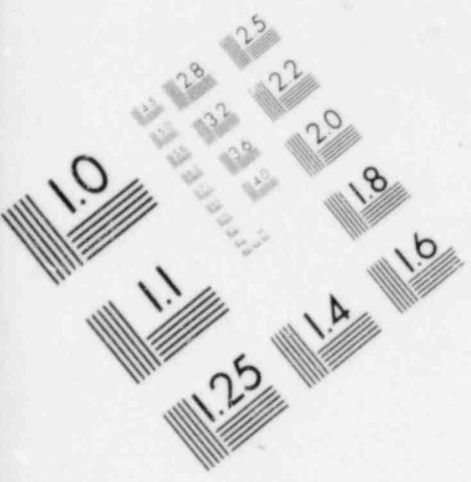
21 I asked them questions about what they were
22 doing. I looked at the documentation. I looked at the
23 sheets that they were using in order to go through this
24 welding.

25 Part of it was a repair, inspect and repair

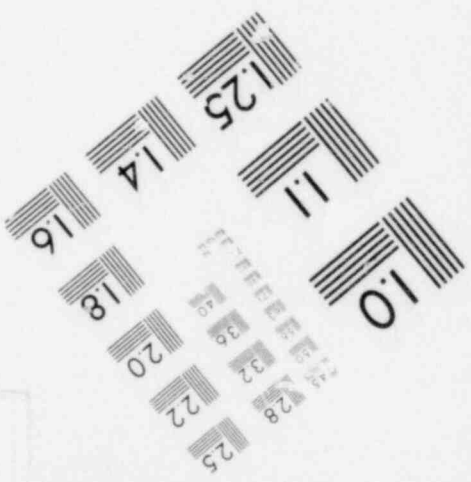
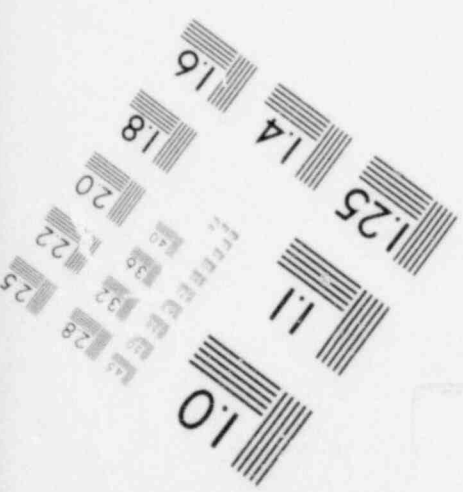
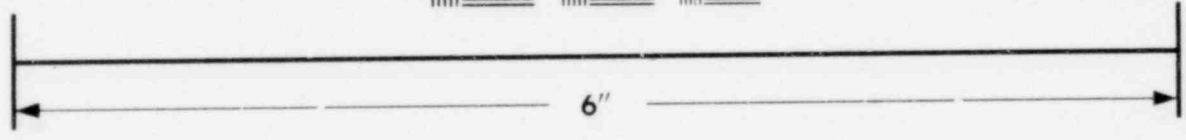
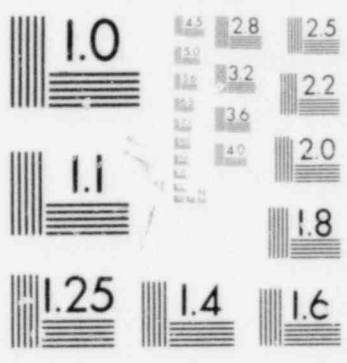


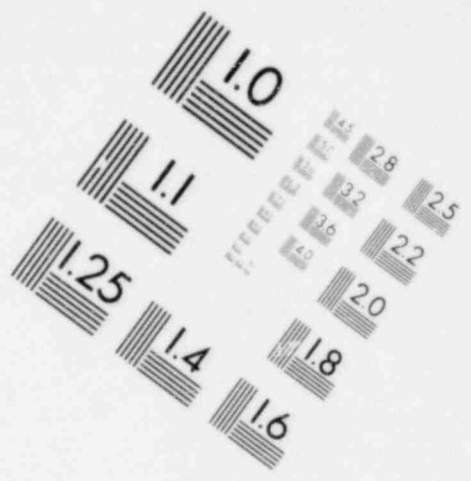
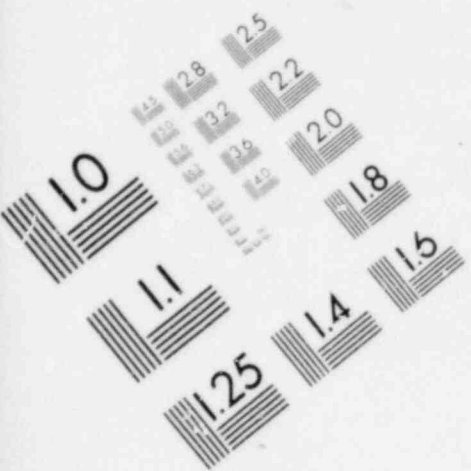
**IMAGE EVALUATION
TEST TARGET (MT-3)**



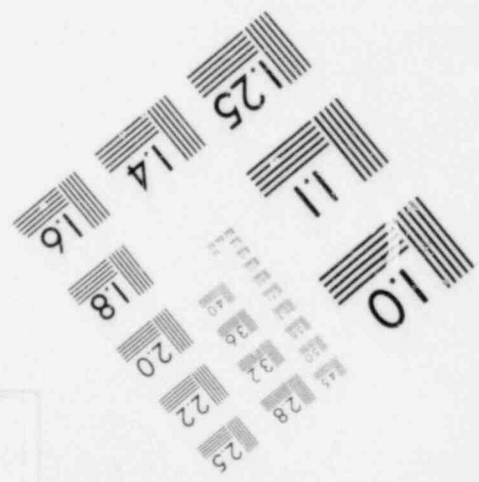
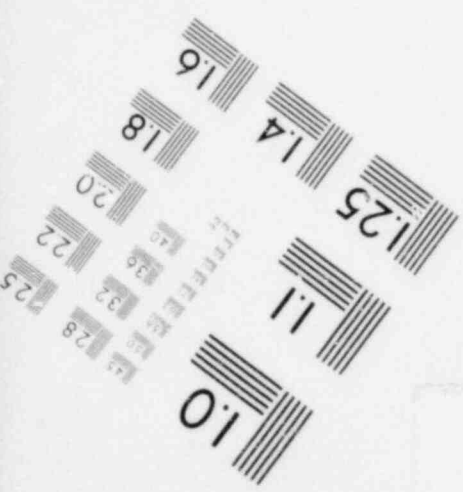
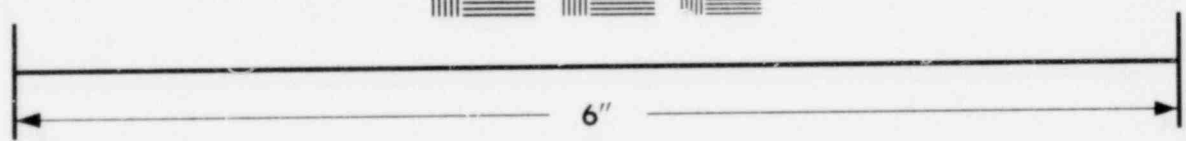
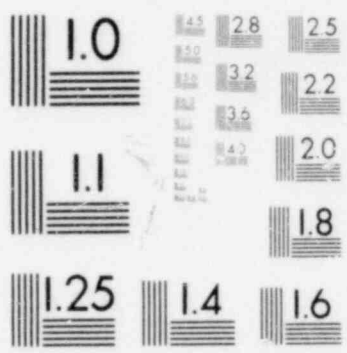


**IMAGE EVALUATION
TEST TARGET (MT-3)**





**IMAGE EVALUATION
TEST TARGET (MT-3)**



-9
1 activity.

2 I asked them questions about what they were
3 doing and things pertaining to procedure and some of the
4 perceptions that they have; and these were doers.

5 Other times I run into general superintendents
6 or supervisors or foremen. Whenever I'm in the area and
7 the occasion allows itself, if the individuals are not
8 heavily involved where I would heavily distract what they
9 are doing; but if they are at a stopping point, I walk
10 in and start talking to them.

11 I've stopped people in between the Turbine
12 Generator Building and the Reactor Building, saw them walking
13 by, and chatted with them.

14 I'm trying to get an over-all feel in regard
15 to the responsiveness of people on site representing the
16 contractor, as well as our people; but I also want them
17 to get a feel that there are management personnel in both
18 companies that have an in-depth interest in how well they
19 are doing, and whether or not they see problems on the
20 site, and that they have an open-door policy.

21 In fact, I solicit them to give me a call.
22 I've told them, I said, "We are not looking for discrimination
23 towards anybody. We're looking for early solutions to
24 problems that can be identified early, and the worst thing
25 of all anybody can do on the site --" This is basically

-10 1 one of the discussions I had two weeks ago. "-- is wait
2 six months and then use a covert way of conveying information
3 about a problem on the site."

4 I said, "That's doing you and the whole project
5 an injustice. We are interested in solving problems. If
6 you don't want to talk to anybody on the site here, call
7 me at my office. You can not even give me your name. Tell
8 me what the problems are and I'll go get an investigation
9 and look at it."

10 Both Brown & Root and Houston will do that.
11 We're not interested in people from the standpoint of
12 discriminating against them.

13 We're interested in people understanding that
14 they have an over-all responsibility to the project. "I
15 am one of the workers," and they are.

16 We are all part of trying to make things happen
17 down here, and when a problem begins to surface, they should
18 identify the way to solve the problem.

19 That's what I'm trying to accomplish --

20 Q I take it there's no approved levels of communication.
21 In other words, if you have a problem, you go to your
22 supervisor, and if he thinks there's anything wrong, he'll
23 come to me. There's nothing like that, I take it?

24 BY WITNESS OPREA:

25 A No, sir. There's a document that Brown & Root

-11 1 put out relative to open-door policy, in which they identify
2 that anybody on site who feels that they have a problem,
3 feel free, first, to call Region IV if you want to call
4 them; call the executive manager of Brown & Root, and identified,
5 I believe, Mr. Rice; they had my phone number, also, on
6 that document.

7 I pass it out by word of mouth, and I guess
8 what I ought to do is pass out my calling cards so that
9 people have my phone number. Maybe that's the next thing
10 I might do.

11 I really want them to get the message that
12 we are interested in what's going on down there. We want
13 to change things if they need to be changed.

14 If the problems are there and people are purposefully
15 doing things to cause problems, then we have ways of ridding
16 ourselves of those people.

17 I'm talking about intimidation, if that's an
18 attempt on people to do things to the project, to keep
19 things from happening in a positive way that should happen,
20 then we will go ahead and weed out the troublemakers.

21 Q But there's no prescribed channel of communication
22 or anything of that sort?

23 BY WITNESS OPREA:

24 A Well, there's not any of that sort.

25 Q When people are concerned about the project?

1 BY WITNESS OPREA:

2 A. I don't believe so.

3 Q. Pardon?

4 BY WITNESS OPREA:

5 A. I don't believe there's any prescribed channel,
6 that you have to go up the ladder this way.

7 They have access to anybody on the site. They
8 have access -- As an example, Dick Frazar has about 42
9 people on site, most of them in individual offices, some
10 two in an office.

11 But anytime that they had a problem, all they
12 had to do was go get one of Mr. Frazar's people and tell
13 them. Free access at any time on site or off site.

14 Q. Do the workers realize that they have this
15 freedom?

16 BY WITNESS OPREA:

17 A. Well, we try to get that message across to
18 them.

19 (Bench reviews documents.)

20 JUDGE BECHHOEFER: I believe that's all the
21 questions the Board has at this time.

22 Mr. Newman or Axelrad?

23 MR. NEWMAN: Mr. Chairman, I have no redirect
24 at this point.

25 JUDGE BECHHOEFER: Are there further questions

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1 based on the Board's examination?

2 MR. JORDAN: May I have a moment?

3 (Pause.)

4 MR. JORDAN: Your Honor, I don't have any recross
5 for the witness.

6 JUDGE BECKHOEFER: Mr. Sinkin?

7 MR. SINKIN: Just a few questions, Mr. Chairman.

8 RECROSS-EXAMINATION

9 BY MR. SINKIN:

10 Q Mr. Oprea, in response to a question from Mr.
11 Reis, I believe, you said that there was never a breakdown
12 in the QA --

13 MR. REIS: Mr. Chairman --

14 MR. NEWMAN: Mr. Chairman -- I'm sorry, Mr.
15 Reis.

16 MR. REIS: Go ahead, Mr. Newman.

17 MR. NEWMAN: I think before we start, Mr. Sinkin
18 might not be aware of the process we're following, in which
19 questions may be only based on Board questions and responses
20 to Mr. Reis' questions are not appropriate for such a cross-
21 examination at this time.

22 MR. JORDAN: Your Honor, I would like to respond
23 to that. It's from the CEU point of view and based on
24 my own experience in NRC proceedings.

25 There are a number of answers to this, and

1 I'll start with what we started this proceeding with.

2 We started this proceeding with a request relating
3 to how the Staff would proceed with the presenting of the
4 testimony, and we argued about whether they were a proponent
5 or not of the order.

6 We came down -- The Board came down and agreed
7 on a proposition that somehow they were not a proponent.

8 However, Your Honor, there really is no question
9 that we do not have the same interest as the Staff, and
10 we should have the full opportunity to clear up anything
11 that the Staff raises, because theirs is different from
12 ours.

13 I would add that I was in the Seabrook proceeding
14 nearly a month ago, and we came to that question. It was
15 only very recently, I might say, the Appeal Board -- This
16 was an instance of the Appeal Board taking the evidence
17 because of the procedure of the Staff in the case.

18 The Intervenor was completely allowed cross,
19 based on what the Staff had said, and it seems to me that
20 while we may not get to the issue of the burden of proof
21 as a proponent, as you were discussing earlier in this
22 case, the question of who gets to recross on whose direct
23 or whatever, based on somebody else's examination, gets
24 to the point of the interest of the parties and whether
25 they conflict.

-15

1 Now, I might even add to that that the interest
2 of CEU conflicts to a degree -- in fact, considerably,
3 with that of CCANP; and if I find a time where the examination
4 by CCANP is such that that is the case, I will ask for
5 the opportunity to recross or redirect, whatever the case
6 may be, when that time comes.

7 There is hardly any set rule that there is
8 no recross or redirect based on what the Staff has done.

9 MR. NEWMAN: We're not -- Obviously, I have
10 the right to redirect on what the Staff has asked. That's
11 not in issue.

12 The question is at this point we're at recross
13 and the scope of any recross is limited to those questions
14 which I might have, with the panel, during the course of
15 my redirect.

16 I elected to have no redirect on Board questions,
17 and it's my understanding -- certainly, in every case I've
18 worked, that that was the scope of further recross.

19 That is, the scope of the redirect and the
20 Board questions.

21 JUDGE BECHHOEFER: Mr. Reis?

22 MR. REIS: That's my understanding as well.

23 (Bench conference.)
24
25

- - -

1 MR. JORDAN: My only comment on that, Your
2 Honor, is that it seems at best to belie logic.

3 The question of how the recross and redirect
4 goes should not be based on some formality, but on the
5 question of what the interests of the parties in fact are.

6 In this case, the interests of the parties
7 are different.

8 MR. NEWMAN: Obviously, Mr. Chairman, this
9 is a rule of reason. If the rule were otherwise, there
10 would be no end of cross-examination. It would go on forever.

11 This is a well-established procedure within
12 the scope of additional recross.

13 MR. HAGER: Well, I think that comment is rather
14 exaggerated as to whether the recross would go on forever.

15 Mr. Reis asked a finite number of questions
16 and --

17 MR. NEWMAN: Mr. Chairman, I'm going to object.
18 Mr. Sinkin is carrying the burden of this argument.

19 Mr. Hager clearly indicated that Mr. Sinkin
20 was designated for purposes of examination and --

21 MR. HAGER: I clearly indicated that just as
22 Counsel for the Applicant share the burden for argument,
23 Mr. Sinkin and I will also share the burden relative to
24 points of law.

25 JUDGE BECHHOEFER: I don't think we need to

-2
1 discuss it any more. I think we'll let Mr. Sinkin begin
2 and see where he's going and if it's directly related to
3 some of the matter.

4 BY MR. SINKIN:

5 Q Mr. Oprea, in response to examination by Mr. Reis,
6 you said that there had never been a breakdown in QA/QC program at
7 STP in the 79-19. Do you stand by that statement?

8 BY WITNESS OPREA:

9 A I said that NRC Report 79-19 did not say there was
10 an over-all breakdown in the quality assurance program.

11 I don't believe you'll find a statement in
12 that report that says anything about the quality assurance
13 program broken down.

14 I believe they have indicated there were some
15 non-compliances and infractions.

16 Q I believe that the cover letter --

17 MR. NEWMAN: Mr. Chairman, I'm going to object.
18 Now we're clearly outside the scope of any question that
19 has been put by the Board.

20 MR. SINKIN: Yes, outside the scope of the
21 questions that have been put by the Board, and Mr. Newman
22 is making a determination that you would rule that we're
23 only allowed to cross-examine on some questions by the
24 Board.

25 Mr. Reis asked some questions that raised

1 some serious substantive matters, and if we are denied
2 the right to go back to those questions, then I feel we
3 are denied something fundamental here.

4 JUDGE BECHHOEFER: We said you could ask those
5 questions.

6 MR. SINKIN: Well, apparently, Mr. Newman doesn't
7 think so.

8 JUDGE BECHHOEFER: Is the cover letter related to
9 what Mr. Reis asked?

10 MR. SINKIN: They are related.

11 JUDGE BECHHOEFER: All right.

12 BY MR. SINKIN:

13 Q Sir, in your statement that there was never a breakdown
14 in the QA/QC program, your statement was really that the
15 NRC did not...those breakdowns in the QA/QC program? Do
16 you personally --

17 BY WITNESS OPREA:

18 A I personally feel that the quality assurance
19 program did not break down. There had been instances of
20 infractions and non-compliance, but that does not say that
21 the program had broken down.

22 Q How would you respond -- I believe that the
23 cover letter on the show-cause order stated that the violations
24 were so extensive that they should have been readily detected.

25 What does that phrasing mean to you?

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1 MR. NEWMAN: Mr. Chairman, I'm going to object
 2 to this question again. These things, these matters have
 3 nothing to do with the Board questions, and in any event,
 4 the scope of the examination at this point at best is limited
 5 to the Amaral-Oprea joint testimony.

6 There may be a point in time at which one can
 7 ask was there a total breakdown in the program; what did
 8 the NRC mean when it said thus-and-such in a cover letter;
 9 but we're not in that area at all.

10 JUDGE BECHHOEFER: I believe --

11 MR. NEWMAN: Mr. Chairman, if we're talking
 12 about the Amaral-Oprea testimony, that question by
 13 Mr. Feis and that answer by Mr. Oprea are a part of that
 14 testimony.

15 Are we now to go in and dissect the testimony
 16 they gave as a panel and say some of it is the panel testimony
 17 and some of it is not the panel testimony?

18 MR. REIS: Mr. Chairman, this definitely is
 19 not relevant to the corrective measures and the choice
 20 of Bechtel.

21 It might be relevant to other matters, and
 22 Mr. Oprea might be able to say what he thinks about this
 23 at another time; but it is not relevant to what we talk
 24 about as recross in this situation.

25 This is not proper recross in this situation

-5 1 and doesn't even directly go to any matter that this panel
2 is testifying to at this point.

3 MR. SINKIN: I disagree entirely, Mr. Chairman,
4 on this point.

5 The corrective measures to a great extent spring
6 from decisions on what recommendations to take, what alternate
7 to take, spring from the perception they had of what the
8 problem was.

9 JUDGE BECHHOEFER: Well, I think we indicated
10 we would go into this later in one of your other questions.

11 We will sustain the objection for the present
12 only.

13 MR. SINKIN: Well, let me ask in terms of that
14 sustained objection.

15 JUDGE BECHHOEFER: All right.

16 MR. SINKIN: Does that mean that later I can
17 say, "Earlier in another panel you said..." and I won't
18 be cut off because it was another panel?

19 I mean, I see that problem coming down the
20 road.

21 MR. NEWMAN: Mr. Chairman, I want to urge again
22 that we do not try to work in a vacuum. Obviously, to
23 the extent that the question is relevant to the testimony
24 of other panels, that question is not subject to objection
25 on the grounds of relevancy.

1 You can't make that ruling in the abstract.

2 MR. SINKIN: I know that.

3 JUDGE BECHHOEFER: We are not dismissing
4 Mr. Oprea after we get done with this small segment. In
5 this small segment, we are trying to finish up with
6 Mr. Amaral, and that very small section of Mr. Oprea's
7 testimony that deals with that.

8 Mr. Oprea is still fair game for other questions.

9 MR. SINKIN: All right.

10 BY MR. SINKIN:

11 Q Based on questions asked by the Board,
12 Mr. Oprea, you returned to an observation you made earlier,
13 that visibility by management, you perceived as perhaps
14 the key problem. The lack of visibility of HL&P management
15 on the site stressing the commitment you feel towards quality,
16 and you feel that that is the key problem; is that correct?

17 BY WITNESS OPREA:

18 A That's what you said; I didn't.

19 Q You did not?

20 BY WITNESS OPREA:

21 A I said it was one of the causes.

22 Q One of the causes. Do you consider it one
23 of the key causes?

24 BY WITNESS OPREA:

25 A I said it's one of the causes.

1 Q Do you consider it one of the root causes?

2 BY WITNESS OPREA:

3 A It's one of the causes, one of about six causes,
4 that management involvement represents a part of the root
5 cause list.

6 Q Do you consider it part of the root cause list?

7 BY WITNESS OPREA:

8 A Yes.

9 Q Okay.

10 BY WITNESS OPREA:

11 A I've admitted that openly and freely before.

12 Q Well, I thought that you had, yes.

13 That lack of visibility is in part your personal
14 lack of visibility. You feel that if you personally had
15 gone out to the project site more often, been more intimately
16 involved with the people there, that the problems might
17 have been less?

18 BY WITNESS OPREA:

19 A It's supposed to have been the Brown & Root/
20 Houston Lighting & Power Company aspect of more over-all
21 management involvement and visibility, so that the people
22 on site -- I presume you can hear me?

23 Q Yes.

24 BY WITNESS OPREA:

25 A -- the people on site to have a true understanding

1 that management physically is involved, in addition to
2 being mentally and attitudinally involved.

3 Q That would include, for example, Mr. Frazar,
4 too, and his visibility?

5 BY WITNESS OPREA:

6 A Yes. That was one of the changes we made,
7 to put him on site as the QA manager.

8 Q Part of the new program -- and again, this
9 was in response to Board questions -- is this trend analysis
10 that comes to you.

11 Mr. Amaral, actually directing it to you, we're
12 talking about what we hope is effective trend analysis,
13 identification of problems and develop the solutions to
14 those problems.

15 It is your testimony that there was not effective
16 trend analysis until this point in time?

17 BY WITNESS AMARAL:

18 A Did I hear a double negative?

19 Q Is it your testimony that there was not effective
20 trend analysis until this time?

21 MR. NEWMAN: Excuse me. When you say "this
22 time," do you mean today?

23 MR. REIS: Yes, that --

24 MR. SINKIN: Well, let me be more specific.

25 MR. REIS: Mr. Chairman, that's been asked

1 and answered, I think, three or four times.

2 MR. SINKIN: Well, I'm trying to lay a foundation
3 for my next question, but if it's assumed that you have
4 answered that, I assume that the answer to that is no.
5 Is that correct?

6 MR. NEWMAN: Mr. Chairman, that's the same
7 question that he asked --

8 MR. REIS: That's the same question that's
9 been asked and answered.

10 BY MR. SINKIN:

11 Q Well, is it usual in a nuclear project that
12 it is in the fifth year of construction that an effective
13 trend analysis program is finally implemented?

14 BY WITNESS AMARAL:

15 A There are projects that don't have trend analysis.
16 We felt that it was a good tool for this particular project.

17 Q When you say "project," do you mean nuclear
18 construction sites?

19 BY WITNESS AMARAL:

20 A There are nuclear projects that don't have
21 trend analysis program.

22 Q At all?

23 BY WITNESS AMARAL:

24 A Correct.

25 Q So in other words, you recommended it for

-10 1 this project as something that this project needed?

2 BY WITNESS AMARAL:

3 A Yes.

4 Now, every project is bound by criteria to
5 determine causes and effect their solution.

6 Now, a trend analysis program is a better means
7 or more exhaustive means of doing it than, say, a generic
8 corrective measures program; but that also satisfies the
9 criteria for looking at all the non-conformances through
10 auditing, simply analyzing it by observation; that would
11 also quality.

12 By trend analysis, we mean that you have categorized
13 different sorts of defects and that you have the means
14 of inputting these perhaps into a program so that you can
15 sort them.

16 A problem does not appear to look like another
17 problem, but it has characteristics of the same problems,
18 of the character of that problem that's particular.

19 Q Given the fact that there's trend analysis
20 and that there are other programs that have achieved the
21 same goal as trend analysis --

22 BY WITNESS AMARAL:

23 A Yes.

24 Q Is it customary or is it usual or normal in
25 the nuclear industry that such a program would be put

1 in place effectively in the fifth year of construction?

2 BY WITNESS AMARAL:

3 A Yes, sir, and if I may, there were such programs
4 in place, both the Brown & Root and HL&P programs.

5 Q Were they effective?

6 BY WITNESS AMARAL:

7 A Obviously not.

8 Q My question is really focusing on the word
9 "effective." Let me perhaps rephrase it.

10 Is it normal, customary, usual not to have
11 any effective program to detect the --

12 MR. NEWMAN: Mr. Chairman, I object.

13 We are so totally outside the scope of the Board questions,
14 and the question itself calls for speculation.

15 It's just a bad question on some many grounds
16 that I object.

17 MR. REIS: Also, I believe the witness just
18 answered the question in his answer.

19 MR. SINKIN: No. In fact, he indicated in
20 his answer that he did not deal specifically with the term
21 "effective."

22 His answer was that there was a trend analysis
23 program at this plant.

24 MR. REIS: And then he said it wasn't effective.

25 MR. SINKIN: He said it was not effective,

1 and my basic question was is it usual to wait until the
2 fifth year to have an effective program.

3 And that's the end of that series.

4 (Bench conference.)

5 JUDGE BECHHOEFER: Well, I'm a little confused
6 about where that particular question is going.

7 MR. SINKIN: The question was going right to
8 that last question.

9 JUDGE BECHHOEFER: No, it seemed to be a question
10 about really asking for almost a repetition.

11 You asked him if it's normal to have a defective
12 program. We've already heard that it's not necessarily
13 normal to have any program.

14 MR. SINKIN: Well, perhaps if I refreshed to
15 an extent, that there was a discussion a long time ago,
16 yesterday even, about learning curves and all that sort
17 of thing, when things reach a hump and when they get over
18 a hump, when is it normal for a project to be over a particular
19 point.

20 I'm trying to put this in that same context
21 that came up in the context that Mr. Oprea receives now
22 these trend analysis things that he didn't receive before.

23 And in that context, are we a little late,
24 are we early, is this the right time for him to be receiving
25 those kinds of things? That was the question.

1 JUDGE BECHHOEFER: Is that based on any questions
2 we had or any questions the Staff had?

3 MR. SINKIN: There were questions directed
4 to the whole -- Mr. Oprea came forth with the fact that
5 now he gets these trend analysis report --

6 MR. REIS: Mr. Chairman, I --

7 MR. SINKIN: -- based on questions from the
8 Board.

9 MR. REIS: Just a statement and a word in an
10 answer does not necessarily mean that the subject is germane
11 to recross-examination.

12 We've had discussions of trend analysis. I
13 know that we'll have more on trend analysis because I think
14 there's an appropriate place for it; but I don't think
15 that this is the appropriate place for it.

16 I don't think the subject was opened up by
17 just the mention of the word.

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-14 1 MR. NEWMAN: I have checked my notes and I
2 don't find any member of the Board having asked a question
3 regarding the adequacy of the trend analysis program.

4 MR. SINKIN: Well, no. No member of the Board,
5 I don't believe, asked about the adequacy of the trend
6 analysis program. What they asked was --

7 MR. NEWMAN: That's specifically the question
8 you were asking.

9 MR. SINKIN: Well, if I can only ask questions
10 asked by the Board, and it's not much more than that.

11 MR. NEWMAN: I understand that you are a layman,
12 but --

13 MR. HAGER: Mr. Newman, the issue of the trend
14 analysis.... Mr. Sinkin is saying that since the subject
15 has arisen, he can ask about it. It has nothing to do
16 with being a layman. The same problem has arisen before.

17 MR. NEWMAN: I think we're seeing the problem
18 when you have two people at the microphone.

19 The problem with the question is simply that
20 there was no Board question relating to the efficacy of
21 the trend analysis program.

22 That being the case, it's outside the scope
23 of the examination at this point.

24 JUDGE BECHHOEFER: Well, at the moment we've
25 included Staff questions, but I don't think the Staff

1 asked about that either, to my recollection.

2 That being so, I think the question is inappropriate,
3 at this time at least, and I'll sustain the objection.

4 BY MR. SINKIN:

5 Q Mr. Amaral, we were talking about the -- The
6 Board questioned you about -- or actually, Chairman Bechhoefer
7 questioned you about two criteria, and he discussed those
8 criteria with you as to whether they were of equal measure;
9 and particularly Criteria 5, was that of equal weight with
10 the other four criteria in making your determination.

11 MR. NEWMAN: Asked and answered, sir.

12 MR. SINKIN: I haven't asked the question yet,
13 Mr. Newman. I'm trying to lay a predicate so that what
14 I'm about to ask about was indeed asked about by the Board
15 so you won't bother objecting.

16 MR. NEWMAN: If I interrupted your question,
17 I apologize completely.

18 JUDGE BECHHOEFER: I think he was laying a
19 foundation for his question.

20 MR. NEWMAN: I thought there was a question,
21 sir.

22 BY MR. SINKIN:

23 Q My question is, could you please rank for us
24 the five criteria as they relate specifically to this project
25 in the order of their importance to you in the decision-making

1 process on selecting an alternative?

2 BY WITNESS AMARAL:

3 A. I think some of them come out equal.

4 (Documents handed to witness.)

5 I would rank owner control and visibility very
6 high.

7 Q. You said "very high" for number one. If possible,
8 can you put the four in very high, high, that's fine, if
9 you can put them in some kind of rank order.

10 BY WITNESS AMARAL:

11 A. I'm trying to offer it here on a scale from
12 one to five.

13 Q. Okay, fine.

14 BY WITNESS AMARAL:

15 A. Some of these, when they fall in the middle,
16 might be equal.

17 Q. Fine.

18 BY WITNESS AMARAL:

19 A. Quality assurance independence; construction
20 responsibility for quality; owner's programmatic direction;
21 capability of implementation.

22 Q. Thank you, Mr. Amaral.

23 Mr. Oprea, in response to the Board questions
24 regarding Criterion 2, the possibility was raised that in
25 Criterion 2, the construction responsibility for quality,

-17 1 as raised, had an import itself as to which alternative
2 you would select; and your earlier testimony was that if
3 doer responsibility was not fully embraced, it would lead
4 to problems and that you would want to eliminate any option
5 that led to such problems.

6 Have I accurately characterized your response
7 to that?

8 BY WITNESS OPREA:

9 A I think I had the word "risk" in there somewhere.

10 Q That there would be a risk --

11 BY WITNESS OPREA:

12 A The risk of those problems.

13 Q -- of those problems developing?

14 Does that mean that under Criterion 2 you would
15 feel that Option D would have to be eliminated?

16 BY WITNESS OPREA:

17 A Option Who?

18 Q Alternative D.

19 (Witness reviews document.)

20 BY WITNESS OPREA:

21 A Well, what Option D indicates relative to doer
22 responsibility is that there could be a weakening in that
23 doer responsibility.

24 That generally is the drift of what Chairman
25 Bechhoefer spoke to earlier, that there could be an indication

1 or there could be a physical day-to-day weakening of the
2 over-all responsiveness to quality, because of the perception
3 of people the quality control/quality assurance activities
4 are now vested in a third party that is not directly identified
5 with Brown & Root.

6 It's a separate independent group that virtually,
7 if I could say, came off the streets. We put them in there,
8 and now they are doing the QA/QC functions.

9 So there could be that perception that, gee,
10 they are responsible for the quality aspects. So there
11 could be an attitudinal problem that comes with that, and
12 that's a little risky.

13 Q So you risk the kinds of problems that you
14 would want to eliminate by eliminating that option?

15 BY WITNESS OPREA:

16 A You have an increased risk that you have a
17 weakening in your quality program.

18 Q Mr. Amaral, a brief response. Mr. Oprea is
19 saying he had a quite extensive involvement by himself
20 as vice president of the company in the day-to-day operation
21 at the plant, walking around at the site and talking and
22 the things mentioned.

23 Do you see any problems in that level of involvement
24 by senior officials in charge?

25 //

1 BY WITNESS AMARAL:

2 A. No, sir. The president of our company,
3 Mr. Bechtel, frequently makes site visits and shakes people's
4 working on the floor.

5 Q. Mr. Oprea, one final question.

6 You mentioned the open-door policy. How long
7 has there been an open-door policy at this particular project?

8 BY WITNESS OPREA:

9 A. I believe it's been in place, at least by word
10 of mouth, for a period of time; but officially it was through
11 a document that came about, I believe, early last year.

12 Q. As early as 1980?

13 BY WITNESS OPREA:

14 A. Yes, an official document that included my
15 name, et cetera, on it.

16 Q. And how long through word of mouth, then, prior
17 to that?

18 BY WITNESS OPREA:

19 A. Since the beginning of the project.

20 Q. Since the beginning of the project.

21 MR. SINKIN: That concludes my questioning.

22 MR. REIS: Mr. Chairman, I can get through
23 with the panel in a relatively few minutes, I think.

24 //

25 //

RE-CROSS-EXAMINATION

1
2 BY MR. REIS:

3 Q Mr. Oprea, who has primary responsibility to
4 discover and correct quality assurance/quality control
5 problems at the South Texas Project?

6 BY WITNESS OPREA:

7 A To discover and direct?

8 Q To discover and correct.

9 BY WITNESS OPREA:

10 A Oh, correct. The discovery normally would
11 come under the quality engineering function.

12 Q I see. Well, does that primary responsibility
13 rest with Brown & Root?

14 BY WITNESS OPREA:

15 A It rests today with Brown & Root and Houston
16 Lighting & Power, and it always has.

17 Q And the responsibility to deal with quality
18 assurance/quality control problems is the same in Brown
19 & Root as in Houston Lighting & Power?

20 BY WITNESS OPREA:

21 A Well, their responsibility is implementation
22 of the program.

23 Ours is full responsibility for serving as
24 the director of the program through development of the
25 policy, scope, procedures, et cetera.

1 Q Does the NRC have the responsibility to discover
2 and correct the root causes of quality assurance/quality
3 control problems at the South Texas site?

4 BY WITNESS OPREA:

5 A I believe the mere fact that the NRC provides
6 audits, whether announced or otherwise, are indicative
7 of the fact that they think they have the responsibility
8 to uncover whether or not you have any deficiencies or
9 anomalies within your quality assurance program.
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1 BY MR. REIS:

2 Q Where does the buck stop in responsibility for
3 quality assurance/quality control problems at the South Texas
4 Project?

5 BY WITNESS OPREA:

6 A The buck stops always with the Applicant.

7 Q And as a result, if we ranked responsibilities,
8 who would have the primary responsibility?

9 BY WITNESS OPREA:

10 A It's known that the Applicant is always that one
11 that is burdened with the prime responsibility of the quality
12 assurance program.

13 Q Now, on the Bechtel report and the choice, was the
14 report itself drafted after the choice of Option A? The Bechtel
15 report of July 24th, 1980, was that report drafted after
16 Option A was chosen?

17 BY WITNESS OPREA:

18 A I really don't know. You'll have to ask Mr. Amaral.

19 BY WITNESS AMARAL:

20 A I believe it was, Mr. Reis.

21 Q So the report, although -- but the report confirmed
22 a decision that had been made before the time it was prepared?

23 BY WITNESS AMARAL:

24 A Yes. That's correct.

25 Q Okay. Tell me if I'm wrong. There were two

1 organizational problems mentioned before in testimony, although
2 you've mentioned that other things may be more important; one
3 was the long lines of management and the other was personnel.

4 Is that a summary of what you've said?

5 BY WITNESS OPREA:

6 A There were some personnel problems as well as this
7 long line or stream effect in the management chain, yes.

8 Q Now, we've ranked, Mr. Amaral, the five factors,
9 five criteria in choosing which option to accept, and there's
10 been a lot of talk about management's involvement.

11 In looking at the root causes, can you rank those
12 root causes or are they of equal weight?

13 BY WITNESS AMARAL:

14 A Well, I've often felt that the underlying cause
15 was the management cause, because the other root causes
16 transcend the management involvement.

17 The others I would consider on an equal basis.

18 Q I believe the word was spirit of quality, and it
19 was talked about in the sense of permeating all levels of the
20 organization. I may be wrong about the word, but I believe it
21 was spirit of quality, and I believe you used it, Mr. Oprea,
22 in talking about -- did you use the phrase "spirit of quality"
23 permeating the organization, or something similar?

24 BY WITNESS OPREA:

25 A I talked about the quality improvement program that

1 Brown & Root has embarked upon that permeates throughout the
2 organization.

3 Q I see. Did you --

4 BY WITNESS OPREA:

5 A I don't know if I specifically used the words
6 "spirit of quality."

7 Q Well, let me ask you about spirit of quality. I
8 think you used a term similar to it. I didn't catch the exact
9 word.

10 But prior to the changes you began to outline in
11 your recent testimony, was there a spirit of quality throughout
12 the HL&P organization?

13 BY WITNESS OPREA:

14 A Yes, sir.

15 Q And do you think -- was it there before 7919 was
16 issued?

17 BY WITNESS OPREA:

18 A Sir, I didn't catch the first part.

19 Q Was it there before the beginning of 1980?

20 BY WITNESS OPREA:

21 A The spirit was always there. We had an
22 implementation problem.

23 Q Did it go down to the work force on the site?

24 BY WITNESS OPREA:

25 A The best I can understand, for the most part

1 I believe it did.

2 Q But it wasn't there completely is what you're
3 saying when you say "for the most part"?

4 BY WITNESS OPREA:

5 A We had a few kinks in our armor.

6 Q Excuse me?

7 BY WITNESS OPREA:

8 A We had a few kinks in our armor.

9 Q Now, you used several times the word "visibility,"
10 and visibility just means something to be seen. Can you tell me
11 what visibility means to you?

12 BY WITNESS OPREA:

13 A To be seen, and in my case to be heard.

14 Q Well, when you talk about visibility of management,
15 are you just talking about a cosmetic thing, about a surface
16 thing, or what?

17 BY WITNESS OPREA:

18 A No.

19 Q Maybe it's the word and your use of it and mine.

20 BY WITNESS OPREA:

21 A Well, I would think a layman might think in terms
22 of just seeing the physical being walking around on the horizon
23 sort of as a shadow, but what I'm talking about is being there
24 physically in body and discussing the import of the project,
25 the issues, the problems, the concerns that people have, and

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1 that's the intent of visibility in management; not just to be
2 there as a walking edifice of a sort.

3 MR. REIS: That's all I have.

4 (Bench conference.)

5 JUDGE BECHHOEFER: The Board has no questions.

6 Mr. Newman, do you have anything further?

7 MR. NEWMAN: I have nothing further, Mr. Chairman,
8 and I guess I would ask the Board to let Mr. Amaral be
9 permanently excused.

10 JUDGE BECHHOEFER: Any objections?

11 MR. JORDAN: I believe we have some documents that
12 are going to be provided by the Applicants. I have no intention
13 of bringing back Mr. Amaral unless there's something necessary,
14 but I can hardly say now that I object, or I could hardly say
15 now that there is no possibility of that occurring.

16 JUDGE BECHHOEFER: Well, we will have to see the
17 documents, then, that Mr. Amaral will provide.

18 I assume they will be submitted under affidavit
19 or something of that sort?

20 MR. NEWMAN: Mr. Chairman, we're going to work it
21 out with the attorneys for the other parties for the transfer
22 of those documents. I don't believe there will be any
23 difficulty in working out arrangements to get those materials
24 to counsel for the other parties.

25 In terms of whether the documents themselves --

1 you can look at the documents and see the purpose for which
2 they are desired. If you want to make them a part of the
3 evidentiary record, then obviously they will require some sort
4 of authentication or stipulation among the parties.

5 (Bench conference.)

6 JUDGE BECHHOEFER: Subject to our being able to
7 work out an arrangement for these documents, the witness,
8 Mr. Amaral will be released.

9 (Whereupon, Witness Amaral was excused.)

10 JUDGE BECHHOEFER: It being about a quarter of one,
11 I think we will adjourn for lunch.

12 Do you have something?

13 MR. HAGER: I have one minor point.

14 I think Mr. Axelrad did promise that we would have
15 a list of the private witnesses by this morning and we haven't
16 received it yet. I put that on the record yesterday so that I
17 could ask today whether or not we can have it today.

18 MR. AXELRAD: I believe we have that. If you had
19 asked before, we would have given it to you. I just did not
20 recall it at that particular time.

21 MR. HAGER: Do you have it with you today?

22 MR. AXELRAD: The list is being developed by
23 Mr. Hudson and I believe they have it it itemized. I asked him
24 this morning. We have the list here.

25 JUDGE BECHHOEFER: Well, I trust that you can work

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that out in the near future.

We'll break for lunch for about an hour and 15 minutes.

(Whereupon, at 1:00 p.m., a recess was taken until 2:30 p.m., the same day.)

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1 AFTERNOON SESSION

2 2:30 p.m.

3 JUDGE BECHHOEFER: Back on the record.

4 Before we begin further cross-examination of
5 Mr. Goldberg and Mr. Frazar, Mr. Hill has some questions
6 he would like to address to Mr. Goldberg.

7 Whereupon,

8 JEROME H. GOLDBERG

9 RICHARD A. FRAZAR

10 resumed the stand and testified further as follows:

11
12 EXAMINATION

13 BY JUDGE HILL:

14 Q Mr. Goldberg, we have noted a -- let's see -- an
15 absence of some of the panels, and so I'd like to ask
16 you a couple of questions that are related to the senior
17 people on the site.18 And I guess I can start by asking, your office
19 is located in Houston; is that correct?

20 BY WITNESS GOLDBERG:

21 A That is correct. It is located in the suburb
22 of Houston.

23 Q Do you also have an office at the site?

24 BY WITNESS GOLDBERG:

25 A Yes, I do.

1 Q But you do -- But you do not spend full time at
2 the site?

3 BY WITNESS GOLDBERG:

4 A That is correct.

5 Q Let me move down to Mr. Barker. Where is his
6 office?

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BY WITNESS GOLDBERG:

A Mr. Barker's office is at Clinton Drive, which is the headquarters of Brown & Root Engineering.

Q Where is his office?

BY WITNESS GOLDBERG:

A That is correct.

Q All right. Let me move down one more. Mr. English. Where is his office?

BY WITNESS GOLDBERG:

A Mr. English is the Houston Lighting & Power site resident manager, and his office is located at the job site.

Q All right. Now, we've noted that neither of these people, neither Mr. Barker nor Mr. English are on any of the panels.

Now, is that -- Maybe this question is really to Mr. Newman. Is that correct?

MR. NEWMAN: That is correct, Dr. Hill.

JUDGE HILL: I guess the next question is: What could we do in the way of correcting that? We feel that these two people ought to be -- ought to have some kind of involvement in a panel with either, you know, written testimony or be included on a panel.

MR. NEWMAN: It might help us if the Board would indicate the subject of the testimony that it would like each

1 witness to cover or each perspective witness to cover.

2 JUDGE HILL: Well, it is the same area that -- We
3 just feel that the senior -- Mr. Barker is not really at the
4 site.

5 Our first concern was that the senior Houston
6 Lighting & Power construction manager at the site was not
7 represented on any of your panels, and the line of questioning
8 would be in the same general area that we're -- really is
9 directed to Mr. Goldberg.

10 MR. NEWMAN: In other words, you would like to
11 hear from persons in the line of command under Mr. Goldberg.

12 JUDGE HILL: That's correct. And at least down
13 to the level of the senior Houston Lighting representative at
14 the site.

15 MR. NEWMAN: It had been our understanding that
16 we were providing that kind of information in the testimony
17 of Mr. Goldberg, at least descriptions of those activities,
18 because his testimony does cover, for example, the functions
19 of Mr. Barker and it covers the functions of Mr. English, the
20 site supervisor, and their various reporting relationships.

21 But, obviously, if the Board wants to pursue that
22 further with other witnesses, we will do our very best to
23 comply with the Board's wishes.

24 May I get back to the Board on that tomorrow?

25 JUDGE HILL: Yes.

1 Now, we have another name, Mr. Turner, whom we
2 also note is absent from any of the panels. And, now, there
3 specifically our questioning is concerned with the fact that
4 he was the senior officer involved with the construction
5 activities during the period late '79-early '80, and we feel
6 that is very germane to the issues before us.

7 And, so, we would also like to have Mr. Turner
8 be represented on one of the panels.

9 MR. NEWMAN: Okay. We will -- We will try to
10 discuss these arrangements for appearances by these individuals --

11 JUDGE HILL: Yes.

12 MR. NEWMAN: -- for tomorrow.

13 JUDGE HILL: Now, the reason we're doing this
14 right now, injecting ourselves at this point, is that we would
15 like to give you some time, and our feeling is since we aren't
16 going to be here next week, that it gives you the rest of this
17 week and all of next week and perhaps aiming at early in June
18 to be able to have these people represented.

19 Now, the question of whether you have written
20 testimony filed for them, that's something we can discuss.

21 MR. NEWMAN: Fine, sir. I'll get back with the
22 Board and describe what arrangements we can make in just the
23 next couple of days.

24 I think the Board's timing is fine. If we're
25 talking about producing witnesses after June 1st, why, that

1 gives us some time to prepare, and I don't imagine that we will
2 have any difficulty in complying with the Board's --

3 JUDGE HILL: All right.

4 MR. NEWMAN: -- desires.

5 (Bench conference.)

6 JUDGE BECHHOEFER: There's some flexibility in
7 dates, by the way. If it should turn out that the week of
8 the 15th is preferable, that would not present any problems
9 with us.

10 MR. NEWMAN: Well, fine.

11 JUDGE BECHHOEFER: There's a little flexibility
12 there.

13 MR. NEWMAN: I appreciate that. Thank you,
14 Judge Bechhoefer.

15 JUDGE BECHHOEFER: I guess, Mr. Hager?

16 MR. HAGER: Yes.

17 CROSS-EXAMINATION -- RESUMED

18 BY MR. HAGER:

19 Q Welcome back, Mr. Goldberg.

20 MR. NEWMAN: Excuse me. May I just interrupt
21 Mr. Hager for just one second?

22 I just wanted to make a matter of record that
23 copies of the contract between Brown & Root and Houston Lighting &
24 Power have been furnished to the Intervenor, to the Staff, and
25 I believe three copies for the Board.

1 And with that, I turn it over to Mr. Hager.

2 JUDGE BECHHOEFER: We would appreciate that
3 when we get back to Mr. Oprea that this contract be introduced
4 in evidence so that we can ask further questions on it, and I
5 think it would be clearer. I think our questions will be
6 clearer if it is in the record.

7 MR. NEWMAN: We would have no objection if the
8 Board wanted to enter it as a Board exhibit. It -- Or, for
9 that matter, if you wished it as an Applicant's exhibit, I'm
10 sure we could do that, as well, provided --

11 JUDGE BECHHOEFER: Well, I would -- I would guess
12 that Mr. Oprea ought to at least identify it as the right
13 document.

14 MR. NEWMAN: Very well.

15 JUDGE BECHHOEFER: Unless everybody will agree
16 that what has been passed out is the correct document. We
17 think it should be in the record so that we can refer to it.

18 MR. REIS: Mr. Chairman, I only have one question
19 about that document being stipulated as to its authenticity,
20 and that is to verify, and I imagine it is so, that this is
21 the original contract signed in '73 and there are no substituted
22 pages as a result of amendments in that contract.

23 MR. COWAN: Your Honor, that's not a simple
24 question. This is a composite document and which attempts to
25 put together in understandable form both the original contract

1 and the various change orders.

2 My personal knowledge of it is not too good. I've
3 been working on this case for a year, and it has always been
4 represented to me that that is the contract, and I've always
5 assumed that it is. But we'll make absolutely certain that
6 it is properly authenticated.

7 I'm 95 percent sure that that is the contract
8 and all change orders which have been entered pursuant to it,
9 and an effort has been made to put together the original
10 contract and the change orders in a way that will be under-
11 standable.

12 JUDGE BECHHOEFER: It might be preferable to
13 ask Mr. Oprea exactly before we introduce it or have it
14 introduced. I think we can wait until that time.

15 (Bench conference.)

16 JUDGE BECHHOEFER: Okay, Mr. Hager.

17 MR. HAGER: Fine.

18 While we're doing housekeeping, I would just
19 simply note for the record that we have received from the
20 Applicants' attorneys a list of 13 individuals who have seen
21 the names of persons covered by the protective order, just to
22 clear up the record on that matter.

23 BY MR. HAGER:

24 Q Mr. Goldberg, we were, I think, in the last
25 discussion, which was some days ago now, we were talking about

1 your analysis that people were the problem at South Texas
2 Nuclear Project, and since that time we've also heard similar
3 testimony from Mr. Amaral.

4 It is true that you are the highest level change
5 in personnel at Houston Lighting & Power pertaining to the
6 work at South Texas Nuclear Project; is that not true?

7 BY WITNESS GOLDBERG:

8 A I believe that's correct.

9 Q Now, just a few questions on your early experience
10 to just fill out the record on that.

11 You had testified that after leaving the
12 Merchant Marine Academy and serving in the Navy for two years
13 you worked between 1955 and 1971 at the same job. And I wanted
14 to simply clarify, was -- did Bethlehem Steel sell the
15 operation to General Dynamics? Is that what happened in that
16 period, '64?

17 BY WITNESS GOLDBERG:

18 A They sold at the end of 1963, and General Dynamics
19 took over the facility on January 1st, 1964.

20 Q Were there any changes in your job or
21 responsibilities at that time of the changover?

22 BY WITNESS GOLDBERG:

23 A Not in the -- Not to the extent of job assignment.
24 The job became more, shall we say, extensive in that we were
25 already involved in the construction of two nuclear submarines

1 and General Dynamics added two more.

2 Q Okay. Did nearly everybody else stay on the job
3 at that time? Was there a big personnel changeover between
4 Bethlehem Steel and General Dynamics, or was it really a
5 takeover in the sense that the people on the job remained
6 virtually the same or substantially the same?

7 BY WITNESS GOLDBERG:

8 A There was some changes. A number of people, once
9 the news broke that the facility had been sold, I suspect were
10 concerned about their futures and some undertook to seek
11 employment elsewhere.

12 General Dynamics, in turn, conducted extensive
13 reviews of the personnel to determine which personnel they
14 believed would fit into their organization.

15 So between those two elements, there was certain
16 force reduction.

17 Q Up to 1971, did you feel you were fully challenged
18 in your work at this job?

19 BY WITNESS GOLDBERG:

20 A Oh, yes. Yes.

21 Q And I believe you testified that in 1971 you left
22 in order to stay in the nuclear field.

23 BY WITNESS GOLDBERG:

24 A That's correct.

25 Q That was the principal reason for your leaving at

1 that time.

2 BY WITNESS GOLDBERG:

3 A That's correct.

4 Q Did General Dynamics still have any nuclear
5 operations at that time, in 1971?

6 BY WITNESS GOLDBERG:

7 A They did in Groton, Connecticut, and I had the
8 choice of either going to Groton to stay with their nuclear
9 activities, staying at Quincy in a non-nuclear capacity, or,
10 obviously, seeking my fortunes elsewhere.

11 Q And I believe you testified that you had chosen --
12 you made your choice based on your decision to remain in
13 Boston?

14 BY WITNESS GOLDBERG:

15 A I was introduced to an opportunity with Stone &
16 Webster in their nuclear program, and it seemed like an
17 interesting opportunity, and it did enable me to stay in the
18 Boston area. So the combination of the opportunity and the
19 convenience of being able to stay in that area made my decision.

20 Q Okay. You felt the nuclear opportunity was more
21 challenging than that which you would have had at General
22 Dynamics if you had remained with General Dynamics?

23 BY WITNESS GOLDBERG:

24 A I believed --

25 MR. REIS: Mr. Chairman, that question was asked

1 MR. NEWMAN: Mr. Chairman, I'm going to object
2 to the question simply because I don't think it is
3 contributing anything further to the record, these general
4 statements about were you completely fulfilled then and some
5 other time before. I'm not sure where it is going, and, as
6 Mr. Reis indicated, a certain amount of regearing the witness
7 because of the long absence is entirely appropriate, but I'm
8 just not sure that we haven't gone beyond that point now.

9 JUDGE BECHHOEFER: Mr. Hager, where are you headed
10 on this?

11 MR. HAGER: Well --

12 JUDGE BECHHOEFER: We've had quite a few questions
13 on background as it is, and I'd like to know where you are
14 heading.

15 MR. HAGER: The issue of challenge, that this was
16 the principal reason why Mr. Goldberg came to the South Texas
17 Nuclear Project. So I'm just simply exploring his background
18 with relationship to, you know, challenges and changes he may
19 have made in career plans previously to coming to the South
20 Texas Project.

21 JUDGE BECHHOEFER: Well, do you suspect there might
22 be some other reason he came to South Texas?

23 MR. HAGER: Oh, there could be any number of
24 reasons why a person would change a job other than greater
25 challenge. I mean, that's only one conceivable --

1 and answered, and I think it was asked and answered last week,
2 as well. I realize with the panel resuming the stand there
3 has to be some prefatory questions, but lets not completely
4 duplicate, unless I object to the question.

5 JUDGE BECHKOEFER: That will be sustained on that
6 basis. It was asked and answered.

7 BY MR. HAGER:

8 Q Did you work in connection with Stone & Webster
9 at Beaver Valley until your being posted in Boston, or were
10 you posted elsewhere?

11 BY WITNESS GOLDBERG:

12 A My office was in Boston. I did spend an extensive
13 amount of time at the job site as the job got further along.
14 When I joined the project, it was probably in the order of
15 50 or 60 percent complete engineering-wise and probably about
16 25 percent complete construction-wise. And as the job moved
17 further through the various subsequent phases, my presence at
18 the job site ever increased.

19 Q Did the time ever come when you were permanently
20 stationed at the job site at Beaver Valley?

21 BY WITNESS GOLDBERG:

22 A No. No. There were times when it seemed that I
23 was, but I was still operating out of Boston.

24 Q Now, were you fully challenged by your work at
25 Stone & Webster, at least up to the period to, say, 1977?

1 JUDGE BECHHOEFER: I'm trying to figure out
2 what you are trying to show.

3 MR. REIS: Mr. Chairman, I think Mr. Hager's
4 last statement indicates that this is not in an attempt to
5 gather evidence for this proceeding that might be relevant
6 but just fishing around --

7 MR. HAGER: Oh, not at all.

8 MR. REIS: -- in an attempt to land something;
9 that his examination has no purpose and no direction in
10 relation to the issues of this proceeding.

11 If he wants to ask him what he felt would be
12 challenging about this position and why he took this position,
13 fine. But this hooking around and fishing around for things,
14 and I think his last statement indicated that it was just
15 fishing around. Oh, there may be very many reasons --

16 MR. HAGER: I beg --

17 MR. REIS: -- why it would --

18 MR. HAGER: -- to differ. The Chairman asked me
19 if there would be any other reasons.

20 MR. REIS: He is just on a fishing expedition.

21 MR. HAGER: I said there could be other reasons.

22 MR. REIS: Will you do me the courtesy of waiting
23 till I finish --

24 MR. HAGER: I will.

25 MR. REIS: -- my statements in the future, Mr. Hager,

1 please.

2 Thank you.

3 (Bench conference.)

4 MR. NEWMAN: Mr. Chairman, the fact that we are
5 replowing ground is so obvious if one just looks at the
6 transcript itself at page 1168. Mr. Hager said -- If I may be
7 permitted just to quote a couple of paragraphs, I started out
8 with the line of inquiry about asking about the challenge
9 you saw at Houston Lighting & Power. We then talked about
10 the largest part of the challenge.

11 Skipping a few words. . ."I simply wanted to go
12 back and ask you, was there something that you saw as a more
13 important challenge than what we've been talking about?"

14 So all of these things have been gone over
15 before, and, as I said, there's a certain amount of regearing
16 that's okay when you've had an absence of a week or so. But I
17 think that we really at this point can certainly pick up at
18 least with that point in the transcript at which Mr. Hager
19 had put that question to the witness.

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1 JUDGE BECHHOEFER: I think that we will sustain
2 the objection to this unless this series of questions appears
3 to be going some place that we haven't gone through before.

4 MR. HAGER: I would like to --

5 JUDGE BECHHOEFER: So far, it doesn't appear to
6 me, at least, that we're --

7 MR. HAGER: I didn't get a chance to respond to
8 Mr. Newman's point, which is a new point.

9 It is true that I did discuss the challenges
10 at South Texas Nuclear Project. But I just mentioned to the
11 Board that I was exploring Mr. Goldberg's past relationship
12 to challenge in previous jobs.

13 JUDGE BECHHOEFER: Yes. I was saying what
14 difference does it make --

15 MR. HAGER: Well, this goes --

16 JUDGE BECHHOEFER: -- to this proceeding? That's
17 what I'm trying to develop, if there --

18 MR. HAGER: Well, this would go to -- I mean,
19 this would go to the credibility of Mr. Goldberg's position
20 as a qualified trouble-shooter, you know, the motivation and
21 whether he was responding to a challenge or some other reason
22 in coming here. I mean, that's the line of inquiry here.

23 But that's -- I mean, I won't pursue that
24 particular question. I have a few other questions in that
25 general area.

1 JUDGE BECHHOEFER: I think that's a little remote.
2 I would -- I think we've gone through background
3 quite a bit. So unless you are really developing some new
4 area, I would --

5 MR. HAGER: Okay. Well, I'll move on to the next
6 question.

7 BY MR. HAGER:

8 Q Mr. Goldberg, you mentioned that in 1977
9 Stone & Webster was undergoing growing pains with the ever-
10 increasing regulatory requirements at that time.

11 Can you tell us when did those growing pains
12 begin for Stone & Webster?

13 MR. REIS: Mr. Chairman, I object. I don't see
14 where the relevance of Stone & Webster's growing pains has
15 anything to do with this proceeding.

16 MR. HAGER: Well, this proceeding has to do with
17 the growing pains of South Texas Nuclear Project.
18 Mr. Goldberg's previous experience is with Stone & Webster
19 as far as commercial reactors goes. So I wanted to test some
20 of his experience and knowledge with regard to growing pains
21 of a similar nature with these -- with Beaver Valley and other
22 projects with which Mr. Goldberg is experienced.

23 MR. REIS: This is quite remote, your Honor, and
24 I object on the grounds of relevancy.

25 (Bench conference.)

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JUDGE BECHHOEFER: I'll let you ask one or two questions just to see where you are going. But let's try to get it in focus on this proceeding.

MR. HAGER: Well, I think I'm going to have to -- I mean, I will ask the two questions just by way of preface that Mr. Goldberg has only been with this project since October, and he is the highest level change, he has just testified, that's been made in the personnel of this project.

Now, his past qualifications become very, very relevant as to the effect that we're going to give to that change in assessing the Houston Lighting & Power's response to the show-cause order. I mean, the highest level of change they've made in Mr. Goldberg. We want to know who is Mr. Goldberg.

Now, this is the relevance. I think it has direct relevance, and it isn't something that peripheral.

JUDGE BECHHOEFER: Well, I'll let you ask questions --

MR. HAGER: Okay.

JUDGE BECHHOEFER: -- a little along this line, but please try to focus in on it quite soon --

MR. HAGER: I intend to focus --

JUDGE BECHHOEFER: -- on the specific relevancy to this proceeding.

MR. HAGER: Yes. Well, I intend to focus on

1 Mr. Goldberg's past experience and --

2 JUDGE BECHHOEFER: Well, try to connect it up
3 to find out whether anything in his past experience is
4 comparable to this project and --

5 MR. HAGER: Well, to find out that, I have to
6 find out his past -- We may find out that none of his past
7 experience is relevant, and that would be very important for
8 this proceeding. But to do that, I have to ask some questions.

9 JUDGE BECHHOEFER: Why don't you just ask him
10 about comparability? I'm not telling you how to ask your
11 questions, but --

12 MR. HAGER: Okay.

13 BY MR. HAGER:

14 Q The question, I think, that was allowed by the
15 Board was when did the growing pains begin?

16 BY WITNESS GOLDBERG:

17 A In terms of size, they were starting back in
18 the early '70's, 1971, '72, '73. Those were very lucrative
19 years as far as bringing in new projects.

20 Q And did a time come when you felt that
21 Stone & Webster had gotten on top of these growing pains,
22 that they could solve them?

23 BY WITNESS GOLDBERG:

24 A I'd like to answer your question in this manner:
25 I alluded last week to the fact that in the naval nuclear

1 business it took something in the order of 10 or 12 years
2 for a facility to really get on top of a job, to be in front,
3 if you will, of the issues, to stop problems before they
4 start.

5 Now, when the commercial industry started to grow
6 and a number of people came over from naval nuclear end of the
7 activities, they brought to the commercial industry that
8 experience, and depending on what extent a company may have
9 had that experience brought to bear would dictate how quickly
10 they learned, how quickly they got on top of a job.

11 So I don't think there's any simple answer for
12 those projects within Stone & Webster. Where this experience
13 was able to be deployed, those projects tended to get in step
14 a little bit sooner than others.

15 Q I believe you had testified previously that
16 it was in response to these growing pains that in 1977 you
17 were transferred to become the construction manager at
18 Beaver Valley II.

19 Is that a correct recollection?

20 BY WITNESS GOLDBERG:

21 A That is correct.

22 Q So that could we say that the growing pains were
23 somehow focused around that year, 1977, or that they
24 substantially predated that?

25

1 BY WITNESS GOLDBERG:

2 A Well, I think a more accurate characterization
3 would be that a number of the jobs that were in the design
4 stage back in the early '70's had reached that point in the
5 program where they were finishing up and you were now at
6 the point where everything had to be verified as having been
7 done completely and correctly, and there were some surprises
8 that were uncovered at various jobs.

9 And to that extent, the management of Stone &
10 Webster decided that they wanted to put some stronger
11 technical talent on the construction site of the house in
12 order to enable construction to more effectively deal with
13 its challenges.

14 Q Were these challenges, the verification problems
15 that you're talking about, were these quality assurance
16 problems?

17 BY WITNESS GOLDBERG:

18 A In the broad sense they'd be categorized
19 quality assurance.

20 Q Were they licensing problems?

21 BY WITNESS GOLDBERG:

22 A No. I think I'd characterize them as, in the
23 broad sense, quality assurance, and speaking of construction,
24 in particular, the cycle of having detailed programs to
25 carry out your activities, to effect some meaningful training

1 of the resources, the human resources in carrying out those
2 activities, and then to assure that you've completed your work
3 properly. And to that extent, they wanted to enhance, if you
4 will, that capability within Stone & Webster Construction.

5 Q How far along was Beaver Valley II at that time
6 in construction?

7 BY WITNESS GOLDBERG:

8 A Very, very young. Beaver II would really just
9 gotten off the ground. Beaver II was only one of the number
10 jobs that I was assigned.

11 Q I believe you had said that you were also assigned
12 to be the understudy at North Anna.

13 BY WITNESS GOLDBERG:

14 A That's correct. North Anna I and II.

15 Q Could you explain why you used the term
16 "understudy"? That has peculiar meaning that someone who's
17 training --

18 BY WITNESS GOLDBERG:

19 A The construction manager for North Anna was an
20 executive vice president, and I was just an ordinary vice
21 president. And the company did not feel it appropriate to
22 take off an executive vice president in the middle of the job.
23 So I was there to help him carry out the role.

24 Q Now, you had previously been the project manager
25 at Beaver Valley I; is that correct?

1 BY WITNESS GOLDBERG:

2 A That is correct.

3 Q Could you compare for us in the organization
4 chart the position of project manager and the position of
5 construction manager?

6 BY WITNESS GOLDBERG:

7 A In the days of Beaver Valley I, the previous
8 project manager that -- I should say the project manager that
9 preceded me was also the construction manager, and I was then
10 the project engineer, or as I tried to describe that last week,
11 that would be equivalent to the technical project manager.

12 When we got into the latter stages of the
13 Beaver I activities and the emphasis was being placed on
14 construction completion and preoperational testing, the company
15 decided that the project manager needed to be a person with
16 stronger engineering skills rather than construction skills.

17 So, in effect, when you say the relationship
18 between a construction manager and a project manager, in
19 Stone & Webster that's a very loose connotation. We had cases
20 of people occupying both positions, as I've just illustrated.
21 We've had cases where construction managers have been
22 vice presidents and project managers are not vice presidents.
23 It doesn't tend to follow the parochial lines of authority as
24 one might think.

25 Q At Beaver Valley II was the project manager in

1 a higher position within the organizational structure?

2 MR. REIS: Mr. Chairman, again, I object. I don't
3 know where this is going in rehashing the history of
4 Beaver Valley and so forth. But certainly the questions
5 aren't direct.

6 Further, I believe Mr. Gutierrez has called to
7 my attention, and I seem to remember now, that there was a
8 Board order that we should cease going into Mr. Goldberg's
9 qualifications, the order to Mr. Hager, and to go on, and I
10 think it is time to go on.

11 MR. HAGER: Well, I have just restated a --

12 MR. REIS: And I object --

13 MR. HAGER: -- few minutes ago that I think -- You
14 know, as far as Mr. Goldberg's participation in these hearings,
15 that his previous experience is the most relevant thing he
16 brings to these hearings. He's the man selected to head up
17 the operations out at South Texas Nuclear Project. He's only
18 been here a very short while. And we'd like to know about
19 and put on the record information about his previous experience
20 so that we can at a later time argue his capacity to fulfill
21 this role.

22 JUDGE BECHHOEFER: Very well. I --

23 MR. HAGER: That particular question --

24 JUDGE BECHHOEFER: -- think the real point is how
25 cumulative do we have to get. We have heard --

1 MR. HAGER: Well, that's not cumulative. We don't
2 have on the record the relation -- you know, the position of
3 construction manager that Mr. Goldberg filled in 1977 to 1978,
4 just where that stood in relationship to his previous positions.
5 That's relevant information, the kind of progress a man makes
6 in his previous work. This is part of Mr. Goldberg's relevant
7 work history.

8 JUDGE BECHHOEFER: All right. Well, I'll allow
9 that question. But as you continue, we really want to tie it
10 up to this project, and I think we've gone into background quite
11 a bit. So unless you can come into some --

12 MR. HAGER: This is only prefatory background.
13 I'm just laying down some facts in the record.

14 But in any case, let's get by this question.
15 We can deal with objections --

16 JUDGE BECHHOEFER: We did rule --

17 MR. HAGER: -- at another time.

18 JUDGE BECHHOEFER: -- that the details of --
19 detailed problems that arose in some of these early projects
20 are not going to be relevant --

21 MR. HAGER: I'm only talking at this stage --

22 JUDGE BECHHOEFER: The facts and circumstances
23 of those early projects are so different that they would have
24 little bearing on how you approach a problem at South Texas.
25 So --

1 MR. HAGER: Well, I don't intend to get to retry
2 or try in the wrong forum problems of another project. I have
3 no intent to do that. I'm only trying to assess Mr. Goldberg's
4 work history, and part of this question relates to his -- the
5 pattern of his promotions and so forth with his previous
6 employer. Other questions may relate to the success he found --

7 MR. NEWMAN: Mr. Chairman --

8 MR. REIS: Mr. Chairman --

9 MR. NEWMAN: -- if I may just add something. We've
10 been through this before on this very subject. There was
11 extensive cross-examination concerning Mr. Goldberg's
12 qualifications. Mr. Hager then pursued largely the same things
13 that he's pursuing this afternoon, at least many of the same
14 things.

15 We indicated that at that time the testimony was
16 purely cumulative, and I'm reading from page 1178 of the
17 transcript, and ultimately the Board said I think it is
18 cumulative so we will sustain the objection. And I think that
19 we're just adding more cumulative material now to the record,
20 and I think the Board has given Mr. Hager ample opportunity
21 to tie things together, and I don't think the testimony is
22 going anywhere at this point.

23 MR. REIS: Mr. Chairman, may I be heard on this?

24 JUDGE BECHHOEFER: Yes.

25 MR. REIS: I believe, considering the number -- the

1 amount of time Mr. Hager has spent on his background and what
2 we have developed, that it is time we move on. I think that
3 things are just -- that he has not shown any relevancy to this.
4 He has had ample opportunity. Mr. Jordan went through the
5 matter of his background, as well. And I think that we have
6 fully explored that issue, and I think it is time to connect
7 it directly with a direct question now connecting it to this
8 problem -- project and move on.

9 I don't think there should be any more of this
10 background material at this point. It is just a -- It seems
11 to me that we're getting to the extent -- It goes through my
12 mind -- I don't want to make any accusations, but it is going
13 through my mind that it is being very, very slow and perhaps
14 purposely so.

15 MR. HAGER: It is being -- It is going slow
16 because of all the objections, and the only part that is
17 repetitive is not the questions but my constantly having to
18 restate the grounds for relevance of Mr. Goldberg's background,
19 which to me seems abundantly apparent that here is the person
20 who has been brought in, the only high-level change this
21 company has made, and we're simply trying to get at who is
22 this person; what is his experience.

23 That is relevant. There could be nothing more
24 relevant about Mr. Goldberg than his past experience in light
25 of his limited time with this company and the role that he has

1 been selected to fill here.

2 Now, I have repeated that over and over, but the
3 questions are new. The questions --

4 JUDGE BECHHOEFER: I don't think they are
5 questioning the relevance. The question is: Have we had
6 enough of it? Are we adding anything to the record other than
7 pages?

8 MR. HAGER: Well, no. I mean, this question --

9 JUDGE BECHHOEFER: I mean, so far I --

10 MR. HAGER: I would remind -- This particular
11 question we're -- We have a tendency of Mr. Newman and
12 Mr. Reis to explode this into some high principle. This
13 question relates to Mr. Goldberg held a position as project
14 manager with one project. Two years later he's in the position
15 of construction manager. I'm asking him where in the hierarchal
16 structure of the corporation these two positions lie, just
17 simply to assess his progress during that time with the
18 company that he served previously to coming to South Texas.

19 JUDGE BECHHOEFER: I'll allow --

20 MR. NEWMAN: Mr. Chairman, this is really dejavu.
21 The Board had ruled, as I indicated before, that Mr. Hager's
22 examination concerning Mr. Goldberg's qualifications was
23 cumulative. Mr. Hager reargued the question at transcript 1179,
24 and finally the Chair stated, "I think we will not reconsider.
25 I think the objection has been sustained. I think what he is

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1 doing is important, and he has testified to that. I think
2 the particular results of what he did in his past performance
3 are only marginal and probably not relevant at all to his
4 general experience." Transcript 1180.

5 And I really think that we're just going over
6 the same ground again.

7 JUDGE BECHHOEFER: That specifically related to
8 particular results of -- that were prevalent on a given project.
9 The one question I will allow is -- I will ask -- that
10 Mr. Goldberg may compare his -- the difference between those
11 two positions that were asked about, just generally in terms
12 of level of responsibility.

13 WITNESS GOLDBERG: Well, as a construction manager
14 I was also elected a vice president of the corporation,
15 and at Stone & Webster, construction manager carries a
16 considerable broader range of responsibilities than a project
17 manager. Project managers basically coordinate the activities
18 of various departments, engineering, construction, purchasing.

19 When I was assigned as a construction manager,
20 I had the responsibilities for the construction of the plant,
21 as well as that of two other nuclear plants, as well as the
22 modification of two other nuclear plants.

23 So at the risk of sounding immodest, it was
24 clearly a much more responsible role, covering a broader
25 range of activities.

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MR. SINKIN: Mr. Chairman, can I just weigh in with a comment. I unfortunately was not here for the early examination of Mr. Goldberg, but I did have an opportunity to read some of the transcript that I think Mr. Newman has been quoting from, and I was personally disturbed at what I saw there in that I think what Mr. Hager has laid out is precisely accurate.

We have basically a new man on the job who was brought in at a high position and given a great deal of authority, and our job, your job, this proceedings job, is to assess this person.

We don't have a work history to assess. The only way we can truly assess this person is to go back through their prior history and see if there are things in that prior history that show this is the right man for the job, or things in that prior history that show he's the wrong man for the job, the same kind of analysis Mr. Amaral did of personnel at the plant.

That's the line of questioning I see Mr. Hager pursuing and I can't understand why that isn't the most germane line of questioning to be pursued on this witness.

MR. REIS: Mr. Chairman, I think Mr. Sinkin was arguing a matter that was decided the last time Mr. Goldberg was on the stand. I think he is not following the Board's rulings, and I think the matter is concluded.

1 JUDGE BECHHOEFER: I believe that's so. The reason
2 I'm saying it is because we've had -- it may be relevant, but
3 we've had a lot of testimony on just that subject, and while
4 several individual questions may be not repetitive, in general
5 we aren't really getting any added information that I think can
6 help us reach a decision.

7 We are just going to further and further details
8 about what's already on the record. There comes a point,
9 unless you know of something specific that you think would
10 have any particular effect on the evaluation of Mr. Goldberg's
11 record, unless you're driving at something, I think it's
12 inappropriate to keep asking the same or similar questions.

13 MR. SINKIN: Well, I haven't asked any of the same
14 questions. Excuse me.

15 JUDGE BECHHOEFER: Well, they're slightly different
16 but the subject area is the same, and so far that we've seen
17 nothing has come of it thus far, and unless you have some-
18 thing specific that you're driving at, other than just making
19 a general record on experience, I don't think adding details
20 to the numerous details that are already in the record is going
21 to help us any.

22 MR. SINKIN: Well, the Board has characterized the
23 record. I've looked through the record to see if we have any
24 of this kind of information about Mr. Goldberg's background.

25 I have found that we have no more than he worked in

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1 a certain place for a certain period of time and another place
2 for a certain period of time, and there isn't much flushing out
3 in terms of how well he did in exactly what positions in his
4 career patterns and his motivations, and so forth.

5 I could ask a more direct question that shows,
6 you know, where I'm getting to, but this is relevant material.
7 When it hasn't been gone through on cross, it seems it should
8 be open.

9 MR. REIS: Mr. Chairman, I think we're re-arguing
10 matters we covered on May 13th, and I think this is a re-
11 argument of matters the Board has previously ruled on, and I
12 want to quote from 1178.

13 "Mr. Newman: Mr. Goldberg testified, I think,
14 exhaustively yesterday about his experience in the
15 1975 to 1977 period, and I believe that any further
16 discussion of that period of his career, unless there is
17 some point not yet established, which I don't believe
18 Mr. Hager has identified, I believe the testimony is
19 purely cumulative."

20 There is some discussion of that motion on Page 1179,
21 and the Board says: "I think it's cumulative, so we will
22 sustain the objection."

23 Now, we are re-arguing the same objections, the
24 same testimony, all over again. I think it's time this
25 proceeding moved on.

1 I object to this line of questioning being
2 continued. I think it's been ruled on. It was too cumulative
3 before, and now we're having it re-cumulative, to coin a word.

4 MR. HAGER: Although a question has never been
5 asked before.

6 JUDGE BECHHOEFER: We'll sustain the objection.
7 I think it is cumulative. Proceed on another line.

8 BY MR. HAGER:

9 Q Mr. Goldberg, do you claim to have experience as
10 a troubleshooter of nuclear power plant problems?

11 BY WITNESS GOLDBERG:

12 A I'm not sure I appreciate the colloquialism
13 "troubleshooter."

14 Q Mr. Newman and I have used this word on several
15 occasions.

16 BY WITNESS GOLDBERG:

17 A The laws in Texas prohibit shooting trouble.
18 (Laughter.)

19 Q A troubleshooter being one who gravitates towards
20 problem areas so that he can take satisfaction in solving
21 those problems.

22 BY WITNESS GOLDBERG:

23 A Well, I think I did characterize that I am a
24 product of Admiral Rickover, and he always said that if the
25 job isn't tough it isn't worth doing.

1 Q Do you claim to have experience in this in the past
2 as a troubleshooter, a person who goes into problem areas to
3 solve them?

4 MR. NEWMAN: Mr. Chairman, I think that question
5 has been asked and answered. Unless the counselor can establish
6 that his question was not responded to, I think all we're
7 hearing is the question the second time.

8 MR. HAGER: I just omitted saying that I thought
9 that wasn't responsive. I didn't want to say it, so I just
10 thought I'd put the question directly again.

11 JUDGE BECHHOEFER: I think he said yes.

12 MR. HAGER: Well, he said he feels that way. I
13 asked if he has any experience doing this. Does he claim to
14 have any experience doing that; two different issues.

15 One was an attitude. He says he has this attitude.
16 Then I asked whether he has any experience having done this in
17 the past.

18 (Bench conference.)

19 JUDGE BECHHOEFER: I think that was actually
20 answered. In the past he mentioned his activities which would
21 bear on that, so we'll sustain that objection.

22 If you don't have any specific topic you're aiming
23 for in terms of past experience, I don't think the question is
24 appropriate.

25 MR. HAGER: Okay. Well, I'll go to a specific area,

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1 then.

2 BY MR. HAGER:

3 Q Mr. Goldberg, did you ever have an opportunity to
4 troubleshoot piping system problems with Beaver Valley?

5 BY WITNESS GOLDBERG:

6 A I'm not sure I'm going to follow this question.
7 I don't think that any one activity would be characterized as
8 trouble.

9 It's a difficult activity, and to the extent of
10 doing it, someone might characterize it as, quote, trouble-
11 shooting, unquote.

12 Q I'll define what I'm talking about in terms of
13 trouble. I think you asked what trouble meant.

14 Are you familiar with troubles at Beaver Valley,
15 one responsible for shutting that plant down for all but about
16 three and a half months in a 20-month period between March '79
17 and up until about the time you joined the South Texas Nuclear
18 Project?

19 MR. REIS: Mr. Chairman, I object. That was the
20 seismic design matters that we got into last time, and that was
21 objected to, that was sustained. We are now going into that
22 and this is an attempt to get in by the back door what didn't
23 come in through the front door. I object.

24 MR. HAGER: Well, I'm simply asking whether
25 Mr. Goldberg had any experience troubleshooting that particular

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1 problem. He has already testified that he was responsible
2 in the early stages of Beaver Valley for the piping problems
3 there. He testified that this issue came up in a project he
4 was head of, and said between '75 and '77. This later became
5 the cause for a shutdown at Beaver Valley, and I'm simply
6 asking whether he was at any time involved in troubleshooting
7 that particular problem at Beaver Valley, and then we can talk
8 about his experience in troubleshooting that problem.

9 JUDGE BECHHOEFER: I think that one he can answer.

10 WITNESS GOLDBERG: Well, as I mentioned, I guess,
11 last week, the problems associated with the seismic design of
12 piping and equipment stemmed from the use of a computer program
13 called Shock II, and when this problem first unfolded, the
14 characterization was -- the program, I think, was adapted for
15 use by Stone & Webster in 1967, and I believe there were at
16 least two or three other major architect engineers that were
17 also using a similar approach, if not the precise program, and
18 it unfolded, I guess, sometime around 1979. Maybe it was late
19 '78. I'm not sure of the exact date.

20 And just about every engineer at Stone & Webster
21 was pressed into service to help resolve this problem, as were
22 a number of engineers that were brought in from other architect
23 engineering firms who had an interest in this matter.

24 Simply stated, the industry was using, back in the
25 late sixties and early seventies, a program technique which was

1 state of the art, and I guess it was in the mid-seventies that
2 the Nuclear Regulatory Commission had identified a method of
3 load combination which was not embodied in the Shock II program
4 and other programs that used what was called algebraic
5 summation.

6 So to the extent that I and 5,000 other engineers
7 at Stone & Webster who were all pressed to perform whatever
8 help we could, since the reanalysis of five plants, to be
9 precise, involved working around the clock seven days a week
10 for almost 18 months, so there were quite a few engineers that
11 were involved and I was just one of them.

12 BY MR. HAGER:

13 Q Could you give us the date when you were pressed
14 into service?

15 A I don't remember the exact date. I can just recall
16 that I think it was in 1979, but I wouldn't swear to it.

17 Q Before 1979 did you have any occasion to deal with
18 these same problems?

19 A Well, to the extent of using the current technical
20 tools that Stone & Webster was utilizing, the Beaver projects,
21 as well as the Surrey Project, as well as the Maine Yankee
22 Project, as well as the James A. Fitzpatrick Project, and I
23 believe there was one other one, had all used the Shock II
24 program that had been developed back in the late sixties.

25 Q At Nine Mile Point?

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BY WITNESS GOLDBERG:

A. I think it was Nine Mile.

Q. Now, had you ever been assigned the task to study these problems prior to that 1979 date?

BY WITNESS GOLDBERG:

A. No.

Q. These weren't within the terms of reference of your 1975 to 1977 engineering mechanic department?

BY WITNESS GOLDBERG:

A. Oh, engineering mechanics, in the context of the work we did there, we were already working with a totally different program.

Q. Now, is it true that -- correct me if I'm wrong -- it was Teledyne who originally discovered the problems with the pipe support base plate?

MR. NEWMAN: Mr. Chairman, I object to this question.

JUDGE BECHHOEFER: That one I'll sustain. That goes along the line of our earlier ruling. The details of that problem and how it arose, I don't think we should get into here.

BY MR. HAGER:

Q. Was Stone & Webster responsible for discovering the problem themselves?

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1 BY WITNESS GOLDBERG:

2 A I frankly don't know.

3 Q You don't know.

4 Are you familiar with a Special Inspection Report
5 79-03, which cited Stone & Webster for one infraction, two
6 deficiencies and one deviation for failure --

7 MR. REIS: Mr. Chairman, I object.

8 MR. HAGER: We might as well get the question
9 before you object.

10 BY MR. HAGER:

11 Q -- for failure to implement the requirements of
12 10 CFR Part 21, with respect to seismic stress analysis of
13 safety-related piping and the pipe support base plate designs
14 using concrete expansion anchor bolts?

15 MR. REIS: Mr. Chairman, I object. This has
16 nothing to do with this plant. It's again trying to lead us
17 down another path, for whatever purpose. I don't --

18 MR. HAGER: Not at all, I'm just asking if he's
19 familiar.

20 MR. REIS: Let me finish.

21 JUDGE BECHHOEFER: Yes, let Mr. Reis finish.

22 MR. REIS: And I just don't think we should get
23 involved in the design and the other problems, seismic issues
24 at other plants. I know of no seismic issue here. I know of
25 some limited welding issues here, but I know of no real piping

12-11

1 issues, the designs of piping issues here that would be
2 relevant to seismic issues. This is completely and totally
3 irrelevant to these proceedings.

4 MR. HAGER: Mr. Chairman, I'm not introducing this
5 to introduce seismic --

6 MR. REIS: Besides, Mr. Goldberg has previously
7 testified on this matter that he had no part in the design of
8 those systems, I believe.

9 MR. HAGER: Mr. Chairman, I'm not introducing this
10 to discuss or introduce seismic issues. I'm introducing this
11 as violations that were cited against Stone & Webster in areas
12 where Mr. Goldberg -- it's already on the record where
13 Mr. Goldberg had sizeable responsibility, and it goes to the
14 issue of character, again.

15 And I might add that this is not just simply the
16 normal inspection report against a licensee. This is a very
17 exceptional citation against Stone & Webster, a constructor,
18 for violations of Part 21. It's a highly unusual action by
19 the NRC, not your normal I&E report.

20 MR. NEWMAN: Mr. Chairman, I really regard this
21 line of questioning as absolutely outrageous.

22 (Bench conference.)

23 JUDGE BECHHOEFER: Are you going to try to show
24 that Mr. Goldberg was involved?

25 MR. HAGER: Yes.

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JUDGE BECHHOEFER: Objection overruled on that one.

BY MR. HAGER:

Q The question was, are you familiar with one infraction, two deficiencies and one deviation included in the report, Special Inspection Report 79-03 pertaining to the seismic stress analysis of safety-related piping and the pipe support base plate designs?

BY WITNESS GOLDBERG:

A. No, not really. That was 1979. And as I think I indicated earlier, I left engineering in 1977 and came over to construction.

When I got pressed back into service, the concern was strictly the re-stress analysis of a number of systems and I didn't involve myself in any review of whatever the issues were that the NRC had raised.

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1 Q Do you know who Mr. Wessle is within the
2 Stone & Webster organization?

3 BY WITNESS GOLDBERG:

4 A Yes, I do.

5 Q Did you have occasion to work with him in any
6 of the projects for which you were concerned?

7 MR. REIS: I object. I don't see any relevance
8 of whether the witness --

9 JUDGE BECHHOEFER: Yes. What is the relevance?

10 MR. REIS: -- knew Mr. Wessle --

11 MR. HAGER: You don't see it till you get there.

12 MR. NEWMAN: Mr. Chairman, the problem here is
13 that each time we give a finger, a hand is taken, and we're
14 getting down now into areas that are totally unrelated to
15 Mr. Goldberg's present responsibilities.

16 We do not have pipe stress problems here.
17 Mr. Goldberg testified that he was not aware of the particular
18 inspection and enforcement report. There is absolutely no
19 foundation for any further questions, and I really believe we
20 are just totally wasting the time of the Board.

21 JUDGE BECHHOEFER: We'll uphold the objection to
22 the last question.

23 MR. HAGER: Okay. Fine. I'll move on from there.

24 BY MR. HAGER:

25 Q Mr. Goldberg, did you ever serve with Mr. Wessle

1 on an organization of a special task force to address these
2 issues?

3 BY WITNESS GOLDBERG:

4 A Yes, I did.

5 Q What were your responsibilities?

6 BY WITNESS GOLDBERG:

7 A Basically, to review the work being performed
8 by the engineering mechanics people on the night shift. We
9 did work two 12-hour shifts seven days a week.

10 Q Do you recall the approximate date that you
11 served in that capacity?

12 BY WITNESS GOLDBERG:

13 A Not really. Time flies when you have fun.

14 Q Would you -- I won't comment on that.

15 Would I be wrong if I said that you were serving
16 on this committee on March 21st, 1979, and for some period
17 thereafter?

18 BY WITNESS GOLDBERG:

19 A I really couldn't say. I told you, I thought it
20 was '79. But I frankly didn't recall the precise time.

21 Q And can you tell us why you were selected to
22 serve on that Wessle/Goldberg --

23 BY WITNESS GOLDBERG:

24 A I had been the previous head of engineering
25 mechanics, and the sheer volume of this job required that

1 anyone who could participate and help was asked to help.

2 Q And had you had any responsibility for these
3 similar problems when you were the head of engineering
4 mechanics?

5 BY WITNESS GOLDBERG:

6 A I think I testified last week that the problem
7 that you are alluding to stems from a program adopted by
8 Stone & Webster in 1967 that preceded my employment by some
9 four years. Now, perhaps that was forgotten.

10 Q When you were the project manager did you have
11 any discretionary authority to change designs?

12 BY WITNESS GOLDBERG:

13 A As project manager?

14 Q Yes.

15 BY WITNESS GOLDBERG:

16 A Yes. As a matter of fact, I did.

17 Q Or as assistant project manager?

18 BY WITNESS GOLDBERG:

19 A No. As project manager, I did, and previously as
20 project engineer I did. That's correct.

21 Q And that was the period during which these designs
22 were implemented that contained these problems that caused the
23 shutdown of Beaver Valley I?

24 BY WITNESS GOLDBERG:

25 A That was a period in which we used the then

1 available state-of-the-art programs that Stone & Webster had
2 developed in 1967, and the Beaver Valley Project, as well as
3 four other projects, were using the standards of the
4 corporation.

5 Q Now, you've testified that at some time between
6 April of '79 and the spring of 1980 you were no longer
7 challenged in your work, or I think your precise words were
8 "not fully challenged," to be precise on that, and that you
9 were not all that busy.

10 Would you tell us the precise time when this
11 transition came from being fully challenged to not being
12 fully challenged and being not all that busy?

13 BY WITNESS GOLDBERG:

14 A I can recall the circumstances better than I can
15 recall the time. We had finished a major outage at
16 Connecticut Yankee. We had finished a major outage at
17 James A. Fitzpatrick. Beaver Valley II had a program in place
18 that I am reasonably convinced will sustain itself through the
19 balance of the work, and most of the hard work of getting the
20 program set up and working was behind us. And there just
21 didn't seem to be any new mountains to climb, and I was just
22 either going to wait for the next officer senior to me to
23 retire or some other change or seek activities elsewhere,
24 and the South Texas Project seemed like it had sufficient
25 challenge to keep me busy.

1 Q Now, we've heard about the Palo Verde Plant from
2 Mr. Amaral, and my question is do you recognize the Palo Verde
3 Plant or any other plants as being plants that have displayed
4 a high degree of quality in the execution of the design and
5 construction functions?

6 MR. NEWMAN: Mr. Chairman, I'm going to object
7 to the question. I don't see the relevance of the quality of
8 the Palo Verde job.

9 There is no foundation to suggest that Mr. Goldberg
10 had anything to do with the Palo Verde jobs, and nothing in
11 his direct testimony speaks to the Palo Verde jobs, and,
12 therefore, the question is entirely irrelevant to the direct
13 testimony or to any testimony that's been given by Mr. Goldberg
14 in response to the cross-examination.

15 MR. HAGER: Mr. Chairman, I didn't limit my
16 question to the Palo Verde job. I only mentioned that because
17 it had previously been mentioned in these hearings. I mentioned
18 just generally Mr. Goldberg's familiarity with plants that had
19 a reputation for high quality. His previous testimony shows
20 that he is familiar with some plants other than South Texas
21 Project that had -- that had a reputation for being challenges.

22 Now I'm just asking the other side of it, if he's
23 familiar with plants that have a reputation for high quality,
24 just throwing out Palo Verde as one plant that had been
25 mentioned, asking his familiarity with quality. His familiarity

1 with quality, of course, being very, very important to what
2 we're discussing here.

3 JUDGE BECHHOEFER: I don't know. I have --

4 MR. HAGER: There's clearly a foundation --

5 JUDGE BECHHOEFER: I have objections to that
6 because I don't know what plants have a reputation for high
7 quality or what the basis would be. I think that's a little
8 broad.

9 MR. HAGER: I don't either. Mr. Amaral purported
10 to testify that that plant was one of high quality. I'm
11 simply asking Mr. Goldberg whether he had --

12 JUDGE BECHHOEFER: You are asking --

13 MR. NEWMAN: The obvious answer to that is they
14 should have asked the question of Mr. Amaral.

15 MR. REIS: Mr. Chairman, I have a request. As
16 counsel, I ask that the Intervenor's counsel be directed to
17 tell where he is going in the line of his questioning and
18 showing where and what the purpose of -- what he's trying to
19 develop, because it does not seem relevant at this point.

20 MR. HAGER: Quality --

21 JUDGE BECHHOEFER: I'd like an explanation of
22 where you are going on this particular line, because, for
23 one thing, we don't know anything about what plants have
24 any reputation or what a reputation would even mean. I think
25 that the meaning -- The witness can't intelligently answer that

1 question.

2 MR. HAGER: Well, I think this -- I mean, this
3 is a -- I mean, the witness could respond.

4 JUDGE BECHHOEFER: But I'd like to know where
5 you are going on this.

6 MR. HAGER: Well, first, I wanted to establish
7 whether Mr. Goldberg has any familiarity with plants that are
8 of high quality as he had with plants that presented challenges.
9 He's already testified that he was aware of plants that had
10 challenges, and one of them was South Texas Project.

11 So I don't think it is unreasonable that he might
12 also be familiar with plants that are known to have not so
13 many challenges, that they have a reputation for being rather
14 high quality plants and rather smoothly operated. It's the --

15 MR. NEWMAN: Mr. Chairman, if all of that --

16 MR. HAGER: -- converse of what --

17 MR. NEWMAN: -- were established on the record --

18 MR. HAGER: Excuse me, Mr. Newman.

19 MR. NEWMAN: -- what would it show?

20 MR. HAGER: It is simply just a foundation
21 question. I mean, there's no -- I mean, it is certainly
22 relevant. It is certainly relevant. There's no question
23 we're talking about quality of plants, quality of construction.
24 We're talking about Mr. Goldberg's familiarity with plants.
25 He's already testified his familiarity with plants that have

1 a reputation for not having that kind of quality.

2 It is a very harmless question. I don't see why
3 it is worth --

4 JUDGE BECHHOEFER: I think I'll -- I'm going to
5 sustain the objection for the simple reason that the way
6 I interpret your question is you are asking the witness does
7 he have knowledge of any plants other than the ones which have
8 had problems, and that's not a very meaningful addition to the
9 record.

10 So I think we'll sustain the objection.

11 MR. HAGER: Maybe I could lay down some foundation
12 for that question, then, in talking about the -- what standards
13 Mr. Goldberg might apply to assess quality in a plant. For
14 example, would the --

15 MR. REIS: Before the question is asked --

16 MR. HAGER: Before the question, Mr. Reis?

17 MR. REIS: Yes. Before the question is asked.

18 MR. HAGER: This is really going -- The objections
19 are getting out of hand here.

20 MR. REIS: I have a motion pending to show -- I
21 understood it was a foundation question. Now he's asking a
22 foundation of a foundation.

23 I asked that the Board direct counsel to show
24 where he is going, what is the basis of these foundation
25 questions. Unless there is a relevance to the ultimate

1 question, then the foundations may not be laid. And I don't
2 see any relevance. Most of the time you don't object to
3 foundation questions. You can see some relevance. In this
4 case, I cannot see relevance, and I want to know what the
5 relevance is. What are these foundation questions leading to?

6 JUDGE BECHHOEFER: I'll grant your motion. I'd
7 like to know myself.

8 MR. HAGER: Well, that particular question was
9 simply to lay down Mr. Goldberg's standards for assessing
10 a quality plant and a plant that presents challenges. He's
11 testified earlier that South Texas Project presented challenges.
12 So I'm simply trying to get at the basis for that conclusion
13 that South Texas Project presented more challenges than some
14 other plant.

15 MR. NEWMAN: Mr. Chairman, I guess --

16 MR. HAGER: So I'm asking for criteria --

17 MR. NEWMAN: -- the obvious -- The obvious point
18 there is why doesn't that question be put to the witness? Why
19 can't he ask him what challenge did you perceive at STP?

20 MR. HAGER: Principally, because I'm conducting
21 cross-examination, not you, Mr. Newman. You would ask the easy
22 question. I'm trying to ask it in a different form. I think
23 that's the discretion of counsel to ask the questions in the
24 form that he wishes.

25 MR. REIS: Mr. Chairman, I don't think that's

1 completely true in NRC proceedings or in any proceeding. I
2 don't think that the witness can take up days or hours
3 building massive foundations. I think the time comes when a
4 witness -- when a counsel owes the Board and owes the
5 Commission some obligations to be direct and ask his question.

6 MR. HAGER: This --

7 MR. REIS: And I don't think the art of cross-
8 examination should over weigh a desire to get matters on the
9 record and get at the truth.

10 MR. HAGER: Mr. Chairman, if we're talking about
11 time, the questions that I've asked have had no inherent
12 legal problems with them. Most of the time that we have taken
13 up in my cross --

14 JUDGE BECHHOEFER: Well, the one I --

15 MR. HAGER: -- has been with objections.

16 JUDGE BECHHOEFER: I thought the one I -- The
17 last one, the objection I sustained had a legal problem. I
18 think it was unanswerable in terms of the record that we would
19 like to see created.

20 MR. HAGER: Well, that was the purpose of my
21 next question was rather than to jump all the way to
22 Mr. Goldberg's conclusion which he was able to make on the
23 other side of the equation, the lack of quality, I'm going
24 behind that now to ask the standards he would apply to assess
25 a plant that presents challenges and plants that don't. It is

1 to lay a bit of foundation for his other conclusion. That
2 is certainly answerable.

3 JUDGE BECHHOEFER: Why don't you ask him just
4 that question without beating around?

5 MR. HAGER: Very good. That was the question.

6 BY MR. HAGER:

7 Q What standards would you apply, and, specifically,
8 would you apply a standard that would relate to the absence
9 of NRC citations as an indicator of quality work?

10 MR. NEWMAN: I'm not sure that that question is
11 answerable either. At least, I didn't hear it.

12 Can we have the reporter read that back?

13 MR. HAGER: We've had a ruling.

14 MR. NEWMAN: Unless the Chair -- Did the Chair --

15 MR. HAGER: I think we've had a ruling on that,
16 Mr. Newman.

17 JUDGE BECHHOEFER: I think --

18 MR. HAGER: That was the same question.

19 JUDGE BECHHOEFER: What -- I'm not sure how those
20 standards work in there.

21 Are you asking him how he would evaluate a record
22 of lack of citations?

23 MR. HAGER: Yes. And I also gave him the
24 opportunity to volunteer any other indicators of quality
25 other than that. But I would like him to address that

1 specifically.

2 MR. REIS: Unless Mr. Hager can bring out through
3 the witness, which I doubt because he does not work for NRC,
4 the basis upon which citations are issued, when citations
5 are issued and when they are not, I don't think the question
6 has any foundation or any relevance.

7 MR. HAGER: I'm asking whether those citations
8 are used by Mr. Goldberg in his own assessment of which
9 plants are high quality plants and which are not, and it has
10 nothing to do with the NRC's basis as to whether he relies upon
11 those citations as --

12 MR. REIS: Mr. Chairman --

13 MR. NEWMAN: Mr. Goldberg's assessment of what
14 are high quality plants has nothing whatever to do with this
15 project.

16 MR. HAGER: It has everything to do with this
17 project. He's here to make sure that the South Texas Project
18 is a high quality project.

19 MR. NEWMAN: He did not say that the South Texas
20 Project was a low quality project, a medium quality project,
21 or a high quality project.

22 You are -- I think what you are trying to get at
23 is some -- again, some basis in Mr. -- or some doubt that you
24 seek to raise with respect to Mr. Goldberg's background, and I
25 don't see -- Even as to that matter, which has been looked at

1 ad nauseam, I cannot see how this latest question possibly
2 even relates to that point.

3 JUDGE BECHHOEFER: Well, the only thing that I
4 can see that's relevant, and maybe I'll ask if the witness
5 wishes to address it, is how he would judge -- how he would
6 differentiate from a plant which he judged had problems from
7 one he judged not to have at least significant problems.

8 WITNESS GOLDBERG: Well, Chairman Bechhoefer, I
9 think, in my experience, every plant has had problems at some
10 point in its history, and I doubt seriously if any of them
11 have ever been designed and constructed that have not had
12 some form of NRC citation.

13 Now, I think the issue really relates to at what
14 point in the cycle is each particular plant. Are they -- Are
15 they currently in a state of difficulty and they are working
16 their way out, or are they in a situation where they've gotten
17 their mistakes behind them?

18 To the extent of all the plants that are now
19 licensed and operating, I think it is fair to say that they
20 clearly have got their problems behind them. Certainly those
21 that are the type that you encounter during the design and
22 construction period. And that isn't to say that at some
23 later date that some problems that were undetected may not show
24 at a later date. But when they do, then efforts are deployed
25 to deal with those.

1 To that extent, I could characterize that South
2 Texas does not yet have its problems behind it. We think
3 we're working on that road, and I guess that's what this
4 hearing is all about.

5 JUDGE BECHHOEFER: So when you spoke about seeing
6 a challenge to fulfill, you saw some problems with a plant
7 or what you perceived as problems which you thought you could
8 help resolve in the capacity in which you were brought in.

9 WITNESS GOLDBERG: I think it is fair to say
10 that the type of problems I'd perceive based on what I was
11 able to glean in reviewing the show-cause order and having
12 talked with Mr. Oprea during the formulative period before I'd
13 decided to join Houston Lighting & Power, the nature of the
14 problems are not unlike the problems that are very common to
15 plants in the early '70's, particularly where it is the first
16 outing for both the architect engineer and the utility. That
17 is an experience that I think I have some knowledge of.

18 JUDGE BECHHOEFER: Dr. Lamb would like to --

19 JUDGE LAMB: Mr. Goldberg, I've been reserving
20 a question to ask you on that till my time came, but since
21 you raised that question now, I'd like to pursue it.

22 What do you mean by that? I'm not quite clear
23 on just what you mean by the fact that this plant looked like
24 a lot of other plants or the problems here looked like the
25 problems at a lot of other plants in the early '70's. I've

1 never been quite clear on just what you meant by that.

2 WITNESS GOLDBERG: Well, Judge Lamb, the point
 3 that I was trying to convey was in the early '70's there were
 4 a number of utilities that were starting out with their first
 5 nuclear undertaking, and while a number of architect engineers
 6 may not have been working on their first unit, for purposes
 7 of comparing that experience with South Texas, it may very well
 8 have been the first unit because the really comprehensive
 9 NRC quality requirements that do affect the engineering and
 10 construction started to take shape and come into being roughly
 11 around 1972. And while companies may have built plants prior
 12 to that time, they were building them to a totally different
 13 set of standards.

14 So when I look at South Texas, I see a new
 15 undertaking for the utility. It is the first plant that
 16 Brown & Root is designing, and, notwithstanding, it also has
 17 a very difficult set of quality requirements that pertain to
 18 both, both the engineering and construction.

19 So it is reminiscent of the experiences that
 20 I and others in my particular association at Stone & Webster
 21 enjoyed in the early '70's.

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4-1 1 JUDGE LAMB: Thank you.
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BY MR. HAGER:

3 Q Mr. Goldberg, you mentioned in your reply to
4 my question that in the case of an operating plant, you
5 have the problems behind you.

6 Would you use as an indication of the problems
7 in construction the experience, the capacity factor and
8 the availability factor of an operating plant? Could they
9 be indicia of problems in construction?

10 MR. REIS: Mr. Chairman, I object.

11 That has nothing to do with the issues here.
12 As indicias of an operating plant, they involve matters
13 in an operating plant; and unless we can see that those
14 percentages were not caused by operators, that we can narrow
15 it down to know what the factors were that might have caused
16 an operating plant to go, go down, whether it was a problem
17 in fuel, whether it was a problem in construction, or what
18 it was, unless we can have that narrowed down --

19 MR. HAGER: I'll amend that question. It will
20 be narrowed down, as Mr. Rei suggests, to problems in
21 construction.

22 MR. REIS: I think it is totally irrelevant.

23 Further, I would say -- I would go on to say
24 that questions involving operating plants generally are
25 irrelevant, and the capacity factors of operating plants

4-2 1 are irrelevant.

2 We are here dealing with the construction here.
3 We are not dealing with questions of operations that will
4 take place in the future.

5 We're not dealing with that question of the
6 percentage capacity of the plant.

7 MR. NEWMAN: Mr. Chairman, I support the objection
8 and I really ask the Chair to think carefully what conceivable
9 relationship the answer to that question could have, even
10 on the narrow question of Mr. Goldberg's qualifications.

11 How could the capacity factor of operating
12 plants really be of any significance in relation to his
13 testimony? It's irrelevant.

14 MR. HAGER: It may be a factor in assessing
15 the quality of construction of any previous plant with
16 which Mr. Goldberg has been involved.

17 MR. NEWMAN: Mr. Chairman, that's so remote.

18 JUDGE BECHHOEFER: Well, I'll sustain the objection.
19 I don't think there's a connection.

20 BY MR. HAGER:

21 q I don't believe I had an answer to the other
22 question, either, whether NRC violations would be an indicia
23 of quality in the construction of a plant?

24 MR. REIS: Again, Mr. Chairman, unless we know
25 the nature of the violations, the particular violations,

4-3 1 the time, what enforcement program they were made under,
2 and what the enforcement program was at the time, there
3 are just too many variables for the question to be meaningful
4 at all, and thus it is irrelevant.

5 MR. HAGER: I think Mr. Goldberg can make those
6 qualifications.

7 He can either say that yes, they are indicia,
8 or qualify it as Mr. Reis has just suggested and prompted.
9 He could answer in that way.

10 (Bench conference.)

11 JUDGE BECHHOEFER: I'll sustain the objection
12 because of the very broadness of the reasons why inspection
13 reports are issued, violations, et cetera.

14 You can't make any meaning -- It's not a
15 meaningful question in a generic sense.

16 MR. HAGER: Well, I've been foreclosed from
17 asking specific indicia that Mr. Goldberg will use in making
18 his decision as to what is a problem with challenges, as
19 opposed to other plants; and that's simply one indicia
20 that he may or may not have used in arriving at his opinion
21 that one plant or another has challenged.

22 JUDGE BECHHOEFER: Well --

23 MR. NEWMAN: Mr. Chairman, wasn't the last
24 objection sustained?

25 JUDGE BECHHOEFER: Yes, it was.

4-4 1 BY MR. HAGER:

2 Q You had testified that Stone & Webster's operations
3 had become organized and systematic, and I quote.

4 Is it your testimony that Houston Lighting
5 & Power was not as organized and systematic in their operations
6 as was Stone & Webster when you left Stone & Webster?

7 BY WITNESS GOLDBERG:

8 A Well, we're comparing an architect engineering
9 firm with a utility, so I don't think I can draw a direct
10 comparison.

11 Certainly in the context of the work I was
12 doing at Stone & Webster, as I stated, I felt that all
13 the real difficult areas of work that I was involved in
14 had been pretty well systemized, and there wasn't much
15 what I would call opportunity for any innovative work.

16 It was getting pretty systemized.

17 Q And you felt you did have an opportunity for
18 innovative work here at South Texas Project?

19 BY WITNESS GOLDBERG:

20 A Well, we're comparing a company that was in
21 the nuclear business for probably the better part of fifteen
22 years with one that's only been in it for virtually five.

23 Q Okay, and you discussed in the context of the
24 innovative work you've done that the structure of your
25 department hasn't changed substantially; is that correct?

4-5 1 MR. REIS: I'm sorry, I missed a word. The
2 structure --

3 MR. HAGER: Structure.

4 MR. REIS: The structure of what?

5 MR. HAGER: Of the organization under
6 Mr. Goldberg.

7 MR. NEWMAN: Was the question whether he had
8 testified to that?

9 MR. HAGER: Yes.

10 WITNESS GOLDBERG: As I recall, we identified
11 some specific changes and I don't know how to characterize
12 whether that represented significant change or not.

13 BY MR. HAGER:

14 Q Are you saying you don't recall what you testified
15 or --

16 BY WITNESS GOLDBERG:

17 A No, I recall what I said, but I'm not sure
18 if I understand the characterization.

19 Q Whether the structure had changed significantly;
20 those were the terms that were used before.

21 MR. NEWMAN: Mr. Chairman, the question is
22 asked and answered.

23 Mr. Goldberg at the session on either May 12th
24 or 13th --

25 MR. HAGER: Mr. Goldberg said he didn't understand

4-6 1 the question. I was clarifying it, Mr. Newman. He said
2 he didn't understand the terms used.

3 MR. NEWMAN: Well, I think Mr. Goldberg just
4 said to you, "Didn't I give you that information when I
5 testified last time?"

6 MR. HAGER: I'm just simply stating whether
7 or not he testified to that, and then he said he didn't
8 understand the terms. So I used the terms that he had
9 testified to before to see whether that would refresh his
10 recollection.

11 MR. NEWMAN: He just told you that he answered
12 that question last week.

13 JUDGE BECHHOEFER: He has said he testified
14 to that question, I believe.

15 MR. HAGER: Okay.

16 BY MR. HAGER:

17 Q And you also testified, is it not correct,
18 that the program was adequate?

19 BY WITNESS GOLDBERG:

20 A I believe the program is adequate, yes.

21 Q And that the principal need you found was the
22 need for added experience in the people?

23 BY WITNESS GOLDBERG:

24 A That's right, basically in the execution.

25 Q Now, did you -- You also testified, I believe,

4-7 1 that you looked at people in concern with an appreciation
2 for the problems at South Texas Project; is that also correct?

3 BY WITNESS GOLDBERG:

4 A I think that's correct. I don't know whether
5 that was precisely stated that way.

6 Q Okay. I'll rephrase that question.

7 Have the changes that you have made in the
8 people out at South Texas Project to date attempted to
9 match personnel changes to the most important problem areas?

10 BY WITNESS GOLDBERG:

11 A I believe so, and I'd like to further qualify
12 that the changes that I would like to see made go beyond
13 just Houston Lighting & Power Company.

14 Q Would these include Brown & Root, are you suggesting?

15 BY WITNESS GOLDBERG:

16 A That is correct.

17 Q Okay. Now, just for the moment looking only
18 at Houston Lighting & Power, you said that you looked only
19 at the key roles, the 30 or 40 key roles in the plant.

20 BY WITNESS GOLDBERG:

21 A That is correct.

22 Q Could you tell us how many changes that you've
23 been responsible for in those key roles?

24 BY WITNESS GOLDBERG:

25 A We to date have executed -- and this was mentioned

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1 last week -- the establishment of a manager of licensing.

2 We are in the process of trying to recruit
3 a seasoned technical manager to replace Mr. Granger who
4 left the job some time back, I believe in early April.

5 We will be bringing aboard on June 1st an experienced,
6 seasoned construction manager who has been involved in
7 the construction of a number of pressurized water reactor
8 plants.

9 Q Can you give us his name? I don't mean to
10 interrupt you.

11 BY WITNESS GOLDBERG:

12 A Well, I can now. Last week he had not accepted.
13 I do have his letter of acceptance.

14 If his name is important, it's Mr. James Williams.

15 JUDGE BECHHOEFER: Pardon me. I didn't hear
16 that.

17 WITNESS GOLDBERG: Mr. James Williams.

18 JUDGE BECHHOEFER: Let's take a brief recess.

19 (Recess taken.)

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1 JUDGE BECHHOEFER: Back on the record.

2 You may continue.

3 MR. NEWMAN: Mr. Chairman, I just have one
4 preliminary matter that I'd like to mention -- if I may,
5 Mr. Hager.

6 At the break I discussed with Mr. Goldberg
7 Judge Hill's request for witnesses, additional witnesses.

8 Mr. Goldberg advised me that Mr. James Williams,
9 whom he had just announced as the new construction manager
10 effective June 1, will replace Mr. English.

11 Now, we would be very happy to have Mr. Williams
12 testify before the Board in June, certainly to the extent the
13 Board is interested in knowing what the qualifications are
14 of the people in place at the site.

15 I believe that that would furnish an opportunity
16 for the Board to test Mr. Williams' qualifications, and if
17 that's satisfactory, we will produce Mr. Williams and
18 Mr. Barker and, Mr. Oprea advises me, Mr. Turner as well.

19 I'm sorry, Mr. Hager.

20 MR. HAGER: I didn't hear Mr. English's name.

21 JUDGE HILL: I have just one question. Mr. English,
22 what was his position during the period of late '79 and early '80?

23 MR. NEWMAN: I hesitate to give you a precise title
24 because I'm not really sure what it was.

25 Can someone help me?

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WITNESS FRAZAR: Mr. English's title is site manager.

JUDGE HILL: Was that his position during late '79, early '80?

WITNESS FRAZAR: Yes, sir, I believe it was.

JUDGE HILL: Then I think it would be appropriate for us to also hear from Mr. English in the same context that we want to hear from Mr. Turner.

MR. NEWMAN: Right. The reason I couldn't give you an immediate firm commitment on Mr. English is that he will be leaving the area, but I would imagine we can make arrangements for him to come back for testimony before the Board, and I'll verify that as soon as I can.

JUDGE HILL: All right.

JUDGE BECHHOEFER: Mr. Hager.

MR. HAGER: Yes. During the break I looked through the record to see if I could find any mention of Mr. Goldberg's prior troubleshooting experience, and I only found one item I'd like to clarify.

BY MR. HAGER:

Q Your experience with the Connecticut Yankee issue of changing out the old designs with new designs for the electrical penetrations, was that a troubleshooting experience or simple execution of --

MR. NEWMAN: Mr. Chairman, I am not going to object.

1 I just want to make a point.

2 At the time we took the break the witness was in
3 mid-response to a question from Mr. Hager, namely, have you
4 looked at the key roles and what changes have you been
5 responsible for since you've taken over the job; Mr. Goldberg
6 had mentioned a manager of licensing and a seasoned technical
7 manager to replace Mr. Granger and an experienced construction
8 manager, Mr. Williams, and at that point the Board took a
9 break.

10 I think the question is still there. I'm not sure
11 the witness has finished his answer. If he has, obviously then
12 there's nothing further, but if he has not --

13 MR. HAGER: Well, there's no question that I'll be
14 getting back to that area of inquiry. I did want to get this
15 one item out of the way and then move on.

16 JUDGE BECHHOEFER: Well, I think the witness should
17 be able to finish the question he started answering, the
18 earlier one, I guess on the personnel changes you had been
19 listing.

20 You had reached Mr. Williams, I guess.

21 WITNESS GOLDBERG: I'm sorry, Chairman Bechhoefer,
22 what was the question relative to Mr. Williams?

23 JUDGE BECHHOEFER: I said you had reached
24 Mr. Williams.

25 WITNESS GOLDBERG: Oh, yes. We have a number of

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1 changes that have been made in engineering that I will identify,
2 and then we have a number of potential changes that we are
3 considering.

4 We have brought aboard a welding engineer, who is
5 now down at the jobsite. We have acquired the services of an
6 ASME-3 pipe stress analysis-pipe support design engineer. We
7 have acquired the services of a fluid transient engineering
8 specialist.

9 We are in the process of acquiring the services of
10 an equipment environmental qualification specialist. We are
11 going to add six seasoned systems engineers, and these would be
12 engineers that are thoroughly conversant with the design of
13 systems, whether they embody mechanical, electrical or control
14 features.

15 We are considering the acquisition of a seasoned
16 technical head to assign to the jobsite to combine the
17 construction engineering and the design engineering functions
18 under a single technical manager at the site.

19 We are steadily, or constantly, I should say,
20 reviewing the organization from a standpoint of performance,
21 and that while these changes both accomplished and completed are
22 our current thinking, I would want to make sure that it's
23 understood that this is a dynamic situation, that the changes
24 are being brought about because of recognition of areas that
25 we need to improve to enhance our role in the engineering and

1 construction of the plant currently and to provide a solid
2 base for our future responsibilities to provide the technical
3 support associated with the operation of the plant.

4 BY MR. HAGER:

5 Q Mr. Goldberg, my question, of course, pertained
6 only to the 30 to 40 key roles that you had earlier mentioned.

7 Do all of these positions, the welding engineer,
8 the pipe stress design specialist, the fluid erosion specialist,
9 and so forth, are they the 30 to 40 key roles to which you
10 referred, or are they something different and apart from that?

11 BY WITNESS GOLDBERG:

12 A No, they are the key roles.

13 Q They all fall within the key roles?

14 BY WITNESS GOLDBERG:

15 A That's correct.

16 Q Now, could you give us -- I assume that those are
17 all the changes that you've made.

18 Can you give us an over-all estimate of the number?
19 The question that I had asked was the number of changes you
20 have made in those 30 to 40 key roles.

21 BY WITNESS GOLDBERG:

22 A It's approximately -- including the ones that we
23 plan to make and have not yet executed, it's about a dozen.

24 Q About a dozen.

25 And these are changes that you are directly

1 responsible for?

2 BY WITNESS GOLDBERG:

3 A That is correct.

4 Q They're not normal turn-over?

5 BY WITNESS GOLDBERG:

6 A No.

7 Q Okay. Do you have any idea what the normal turn-
8 over rate was in those roles?

9 BY WITNESS GOLDBERG:

10 A I don't happen to have a number, but I would
11 characterize, from my discussions with people in the organi-
12 zation, that it's extremely small within HL&P.

13 Q Did you replace Mr. Granger? In other words, did
14 you yourself transfer Mr. Graner, or was he already gone and
15 you're simply finding someone to --

16 BY WITNESS GOLDBERG:

17 A No, the decision was made that -- well, let me
18 answer it by explaining a little more fully the circumstances
19 leading up to his replacement.

20 Mr. Granger had been on this project for some seven
21 years. It was his first job after having graduated from
22 college, and he felt that his career as an engineer was being
23 too closely channeled in one direction. He confessed to me
24 that he would welcome an opportunity to broaden his experience,
25 and since his experience was limited to that gained while on

1 South Texas, I frankly welcomed the opportunity to help
2 Mr. Granger expand his engineering opportunities and at the
3 same time bring in someone to replace him who had a little
4 more seasoning, hopefully someone who had at least the design
5 of one nuclear pressurized water reactor plant behind them.

6 So you might say that his transfer to other duties
7 was in consideration of his career aspirations and in
8 recognition of the fact that I surely would have had to bring
9 somebody in above him had he not chosen to leave, because I
10 felt I needed more experience on HL&P's project team.

11 Q What was the highest level change in personnel
12 made by you?

13 BY WITNESS GOLDBERG:

14 A Well, it would be the change-out, if you will, of
15 Mr. Granger, and the change of bringing in Mr. Williams in
16 place of Mr. English.

17 Q Where does Mr. Robertson fall in that organi-
18 zational chart?

19 BY WITNESS GOLDBERG:

20 A That's a newly created position where we
21 separated out the functions of nuclear licensing from under a
22 function that was previously nuclear services, which included
23 licensing, and we felt that we needed more management attention
24 to licensing without sacrificing the management attention
25 necessary for the balance of activities in nuclear services,

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1 which includes nuclear engineering and health physics, so that
2 was a case of bringing aboard more management talent to provide
3 a little greater emphasis in the day-to-day licensing
4 activities.

5 Q You both made a structural change there and
6 introduced new personnel?

7 BY WITNESS GOLDBERG:

8 A That is correct.

9 Q And is Mr. Robertson at a higher level than
10 Mr. Granger's old position or Mr. Williams' position?

11 BY WITNESS GOLDBERG:

12 A Mr. Robertson's position would be one level higher
13 than Mr. Granger's and Mr. Williams.

14 Q It would be fair to conclude, then, that
15 Mr. Robertson is the highest level change you've introduced
16 in personnel since you've taken over your position at South
17 Texas and with Houston Lighting & Power?

18 BY WITNESS GOLDBERG:

19 A In the parochial sense of level, I guess the
20 answer to that would be yes.

21 Q Have you ever been responsible for licensing
22 functions in any of your previous work?

23 BY WITNESS GOLDBERG:

24 A As a project engineer for a previous Stone &
25 Webster project, the licensing activity is one of a number of

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1 technical responsibilities that come under the project
2 engineer.

3 Q And at this time how much of your time is devoted
4 to licensing?

5 BY WITNESS GOLDBERG:

6 A If I try to characterize it in terms of what
7 part of my workday I might spend on matters related to the
8 licensing matters, it varies from day to day.

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1 Q Could you reflect over the last few months
2 with Houston Lighting & Power and simply state whether
3 more than half or less than half of your time has been
4 spent on licensing matters?

5 BY WITNESS GOLDBERG:

6 A I think it's less than half.

7 Q Would it be less than a quarter?

8 BY WITNESS GOLDBERG:

9 A Well, if I go by the amount of time I put in --
10 I want to make sure that you understand that a quarter
11 of my time may be all of somebody else's time.

12 Q The answer was?

13 BY WITNESS GOLDBERG:

14 A Well, what context? What kind of a --

15 Q A quarter of your time that you've spent on
16 Houston Lighting & Power matters since October down to
17 the present?

18 BY WITNESS GOLDBERG:

19 A In the context of approximately a 70 to 80-
20 hour week, it's about a quarter of that time.

21 Q Whatever your work week happens to be.

22 I didn't hear an answer. Did you --

23 BY WITNESS GOLDBERG:

24 A I said in the context of a 70 or 80-hour work
25 week, it would be about a quarter of my time.

6-2 1 Q About a quarter, thank you.

2 Now, there was some discussion earlier on about
3 your signature of an affidavit on the quality assurance
4 description. This is Attachment 1, Revision 1, dated April
5 22, 1981, submitted with a letter under your signature;
6 and in the affidavit you stated that the quality assurance
7 program description was prepared under your supervision
8 and direction.

9 Could you simply explain to us what the words
10 "supervision and direction" mean to you?

11 BY WITNESS GOLDBERG:

12 A. The people in our Licensing Group that report
13 to me are given the direction to provide the services of
14 preparing the document, embodying the information supplied
15 by the Quality Assurance Department.

16 To the extent that the licensing people prepare
17 the information under my general direction, that's the
18 connotation in the affidavit.

19 BY WITNESS FRAZAR:

20 A. I might add that the licensing people who work
21 under Mr. Goldberg's direction do not have the prerogative
22 in this process of preparation of this document of altering
23 in any way the substance of the information that is provided
24 by the Quality Assurance Department.

25 The document is prepared as a coordinated activity

6-3 1 in which the Quality Assurance Department is the coordinator
2 and the final approver, and other departmental groups within
3 the company furnish inputs to that document, namely engineering,
4 construction, procurement, et cetera.

5 BY WITNESS GOLDBERG:

6 A And if I might add to what Mr. Frazar said,
7 that that relationship is certainly not unlike that of
8 information that we might receive from, say, an Environmental
9 Engineering Department who prepares certain information
10 that gets embodied in various licensing amendments.

11 They prepare the information. The licensing
12 engineers work with them to put it into proper licensing
13 form, and then subject to their review of the final document
14 to assure that the substance has not been changed, it then
15 is presented to my office for my final review.

16 Subject to that review, it is signed out.

17 Q You mentioned a term "license engineer." Could
18 you very briefly for my benefit define what that is?

19 BY WITNESS GOLDBERG:

20 A The licensing engineering function is charged
21 with the responsibility to provide a focal point for our
22 company's activities relative to matters pertaining to
23 providing information in support of our licensing needs.

24 Q Have you personally ever worked as a licensing
25 engineer? I'm trying to get a grasp on what that is.

1 BY WITNESS GOLDBERG:

2 A As I think I indicated a little bit earlier,
3 my first contact with the licensing function at Stone &
4 Webster dealt with the fact that as head of a technical
5 project, the licensing engineer assigned to that project
6 worked under my direction for those matters pertaining
7 to the project.

8 Q Have you ever testified before in licensing
9 proceedings?

10 BY WITNESS GOLDBERG:

11 A Yes.

12 Q What proceedings?

13 BY WITNESS GOLDBERG:

14 A Beaver Valley Unit 1.

15 Q Any others?

16 BY WITNESS GOLDBERG:

17 A Beaver Balley Unit 2.

18 Q Any others? Just go through a list, whatever
19 they are.

20 BY WITNESS GOLDBERG:

21 A No, I think those were the only two I testified.

22 Q Now, back to this opening question of mine
23 about troubleshooting.

24 BY WITNESS GOLDBERG:

25 A Oh, might I just correct myself? I have appeared

6-5 1 before the ACRS and the licensing staff relative to Allens
2 Creek.

3 We have not gone -- well, we are in hearings,
4 and I haven't testified in the hearings, but I have certainly
5 participated in reviews with the ACRS and the Staff relative
6 to the material that is being presented at the hearing.

7 Q Do you recall the material that you testified
8 on in the Beaver Valley proceedings?

9 BY WITNESS GOLDBERG:

10 A I believe in the case of Beaver Valley 1 it
11 pertained to the design of the hydrogen recombiners.

12 Q And Beaver Valley 2?

13 BY WITNESS GOLDBERG:

14 A I think that was principally in the presentation
15 to the ACRS relative to certain broad matters; nothing
16 special that I can recall.

17 Q They didn't have a subject category on them?

18 BY WITNESS GOLDBERG:

19 A Well, we were there in support of the licensee
20 and we fielded whatever questions were raised by the ACRS
21 for which we were qualified to answer, and frankly, I don't
22 remember anything really special.

23 Q Well, just generically then, what were those
24 hearings about?

25 //

1 BY WITNESS GOLDBERG:

2 A. Oh, they embodied the general concerns that
3 ACRS invariably looks into in most proceedings.

4 Q They didn't have any particular focus of any
5 kind?

6 BY WITNESS GOLDBERG:

7 A. I think they were interested at that time --
8 I think there was a lot of discussion about the ultimate
9 heat sink.

10 There was a series of concerns raised by Intervenors
11 in that proceeding pertaining to releases of low-level
12 radiation to the environment.

13 I can't recall what else was covered. Those
14 seem to stick in my mind.

15 Q Okay. What changes have you made, if any --
16 just back briefly to something we discussed earlier --
17 have you made to correct the problems of harassment of
18 quality assurance/quality control inspectors by persons
19 under your supervision?

20 Have you made any concrete changes in your
21 departments?

22 BY WITNESS GOLDBERG:

23 A. In my opinion, these matters are a display
24 of attitudes that I believe are a product of lack of experience;
25 and while I have not detected any problems within the ranks

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1 of Houston Lighting & Power, there is no question in my
2 mind that by bringing greater experience to bear, I believe
3 we will insure that those issues, hopefully, will never
4 manifest themselves.

5 Q And then on this troubleshooting question,
6 you were responsible for execution of the change-out of
7 the old designs with new designs in the context of the
8 electrical penetrations at Connecticut Yankee. Did you
9 consider that a troubleshooting role, or was that simply
10 execution of something that had already been decided beforehand
11 what was to do?

12 BY WITNESS GOLDBERG:

13 A No, that was strictly an execution.

14 Q Fine. You weren't involved in discovering
15 the problem there and discovering the solution to it?

16 BY WITNESS GOLDBERG:

17 A No.

18 Q Had you at any time previous to being moved
19 upstairs to the vice presidency role at Stone & Webster,
20 had you ever changed your job or put in a request for transfer
21 because of the lack of challenge in your employment?

22 MR. NEWMAN: Mr. Chairman, I'm going to object
23 to that question. I think we're back where we were about
24 an hour ago.

25 Asked and answered exhaustively.

1 (Bench conference.)

2 MR. HAGER: It hasn't been answered. That's
3 only one question. I don't intend to --

4 JUDGE BECHHOEFER: No, I think that's beyond --
5 I think that's the line of questioning which we've already
6 ruled out, unless you point to something specific.

7 MR. HAGER: Well, the specific was before he
8 responded to the challenges of the South Texas Project.

9 JUDGE BECHHOEFER: If you know of any specific
10 occasion, you can ask him about it; but I think general
11 exploration --

12 MR. HAGER: The purpose of this question --

13 JUDGE BECHHOEFER: That one is sustained, anyway.

14 MR. HAGER: Could I have the grounds for that?

15 JUDGE BECHHOEFER: Cumulative.

16 MR. HAGER: That question hasn't been asked
17 before.

18 JUDGE BECHHOEFER: No, but numerous others
19 along the same line have been.

20 So, anyway, it's cumulative, and sustained.

21 MR. HAGER: Simply to get a formal ruling on
22 this, Mr. Chairman, we do have a document --

23 JUDGE BECHHOEFER: I thought you had it.

24 MR. HAGER: Excuse me?

25 JUDGE BECHHOEFER: That's about as formal as

6-9 1 I can get. I sustained --

2 MR. HAGER: No, no. This is a different issue.
3 I'm moving away from --

4 JUDGE BECHHOEFER: I see.

5 MR. HAGER: We have a document NUREG-0020.
6 I think most people here would be familiar with it, the
7 Operating Unit Status Report, and we feel it's of general
8 relevance to put into evidence; and we would, of course,
9 like to argue this in briefs after the proceedings here.

10 The question of the availability factor and
11 capacity factor of the units with which Mr. Goldberg has
12 been most closely familiar in his own experience, Beaver
13 Valley 1, and we would simply like to make a formal offer
14 of that at this time, the information contained at page
15 B-3, pertaining to Beaver Valley 1.

16 We would, of course, give Mr. Goldberg an opportunity
17 to respond to that or to explain what we perceive as being
18 an extraordinarily low availability and capacity factors.

19 MR. NEWMAN: Mr. Chairman, it's my understanding
20 that the Board indicated earlier that it didn't want to
21 hear any more questioning concerning the operating history
22 of plants with which Mr. Goldberg had been associated.

23 This is simply a back-door way of bringing
24 in the same question.

25 In any event, he has no way of authenticating

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1 his document. He has got no witness to authenticate his
2 document.

3 But in any event, the big thing is that it
4 is really just totally irrelevant to his testimony; and
5 the Board has ruled that way previously.

6 This is really an unfortunate waste of everybody's
7 time. We are here now --

8 MR. REIS: Mr. Chairman, the Staff would support
9 that. That matter has been ruled upon already.

10 The relevance of the document to his job performance
11 is not shown. We've had a specific ruling on that, that
12 we would not go into capacity factors.

13 There are just too many variables, as the Board
14 recognizes, and I don't think it is relevant to any issue
15 in this proceeding.

16 I think it's been ruled upon and I think --

17 JUDGE BECHHOEFER: You are correct. It has
18 been ruled upon, and we will sustain the objection.

19 MR. HAGER: I simply present it as an offer
20 of evidence. I understand that it's been ruled upon, and
21 I would like to get by the authenticating problems, and
22 I think it's a self-authenticating document.

23 It's an NRC document, and under Rule 2.743,
24 subsection (i), I think it's a document of which the Board
25 could take official notice.

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At this time I'm simply making an offer of evidence so that if the Board would like to rule that Mr. Goldberg could respond to this in any way, this would be the opportunity to do so.

Otherwise, we would hope to be citing this at a later time in our briefs.

MR. NEWMAN: Mr. Chairman, we're back to the question of the Board ruling --

JUDGE BECHHOEFER: The Board will consider that as an offer of proof, but we're turning it down.

I think we could probably take official notice of it if we thought it was relevant, but we don't. So....

MR. HAGER: I have no further questions.

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1 BY MR. REIS:

2 Q Mr. Goldberg, there were some questions asked
3 in relation to construction and the improvements you are
4 making in construction, and antagonism and harassment
5 of quality assurance/quality control inspectors.

6 What relationship do you see, if any, between
7 improvements in construction and that antagonism, an increase
8 in it or a reduction of it?

9 BY WITNESS GOLDBERG:

10 A Based on my experience, when a construction
11 organization starts into the process of building a nuclear
12 powerplant, it usually is an organization that's been working
13 in another industry.

14 More than likely, it could be in construction
15 of non-nuclear powerplants or a petrochemical, paper mills,
16 virtually various types of what's called heavy construction
17 industrial projects.

18 In those jobs, the tendency is that if you
19 get close to the specified requirements, that close is
20 good enough; and having possibly worked in that environment
21 for many years, when a constructor finds himself on a nuclear
22 powerplant project where close is just not acceptable,
23 you must meet the requirements.

24 It's a very frustrating experience. There's
25 a tendency to be short-tempered; and it's in my opinion,

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1 if harassment, intimidation has occurred, it's probably
2 an indication of a lack of experience and maturity that
3 one gets by working at nuclear construction.

4 Now, with people who have been there and understand
5 these problems and can encourage people to better understand
6 that that's the business and like it or not, the shortest
7 way to get to your objective is to quit the bellyaching
8 and knuckle down to the job at hand.

9 That experience can cause, I think, a dramatic
10 change in attitude; and it's my belief that as that experience
11 is brought to bear in greater numbers on both sides of
12 the house, I have every confidence that we're going to
13 get on top of this problem and keep it from reappearing.

14 Q In your talk about changing attitudes, were
15 your remarks directed to Brown & Root or HL&P, or both?

16 BY WITNESS GOLDBERG:

17 A Both.

18 Q Why are you replacing Mr. English with
19 Mr. Williams as the site manager?

20 BY WITNESS GOLDBERG:

21 A Principally because while I believe that
22 Mr. English has been in the business a sufficient number
23 of years, I think he's just not the tough uncompromising
24 person that one has to be, and that kind of goes to maybe
25 his personality.

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1 He's a fine gentleman, and I am sure that when
2 it comes to construction activities, very little is a stranger
3 to him; but I believe that one of the ingredients that
4 one must have is an absolute determination to stick to
5 the requirements at all times and not accept anything less.

6 And I just sensed that we needed a stronger
7 person to provide the leadership to our team on that site.

8 Q You talked a lot about replacing HL&P people
9 on the site. Have you inquired into what your authorities
10 are to have Brown & Root people replaced on the site?

11 BY WITNESS GOLDBERG:

12 A By inquiring into my authorities, I endeavor
13 to press my interest, and until such time as Brown & Root
14 is non-responsive, I would assume that I have the authority
15 to work with their management and point to clear areas
16 in my judgment that need strengthening; and to that end,
17 and with considerable support from my executive management,
18 we've identified to Brown & Root a number of areas that
19 we believe they are in need of strengthening, both in terms
20 of talent, as well as in terms of depth of talent.

21 Q What are these areas?

22 BY WITNESS GOLDBERG:

23 A The more important area that we've identified
24 is the need to broaden both numbers and quality of engineering
25 management, and we believe that this has some bearing on

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1 quality in this respect: There are a number of problems
2 that have occurred at the job site.

3 Virtually every problem, whether it originates
4 with engineering, invariably ends up at engineering's doorstep.

5 Every mistake committed by construction requires
6 an evaluation by engineers to determine the course of corrective
7 action.

8 We believe that Brown & Root is unquestionably
9 trying to meet this challenge with too few key people;
10 and between my own assessment and those of some of Brown
11 & Root's engineering management, we have identified a number
12 of key areas that need to be bolstered.

13 Some of those specific disciplines are design
14 of cable tray supports, design of seismic pipe supports,
15 general increase in the number of technical managers to
16 direct the activities of resources they already have, acquisition
17 of a more senior technical leader to provide over-all technical
18 direction to their project team; and we've suggested some
19 other changes relative to the way they are structured in
20 order to bring more focus of management attention to the
21 needs of the South Texas Project.

22 Q Have these suggestions been made over a period
23 of time or were they made at one particular time?

24 BY WITNESS GOLDBERG:

25 A They've been kind of accumulating over a period

1 of time.

2 Q When did you start to tell them that they needed
3 people in these positions?

4 BY WITNESS GOLDBERG:

5 A I think maybe it started about the end of the
6 first week that I joined HL&P.

7 Q How many of these people have they recruited
8 and put on the staff since then?

9 BY WITNESS GOLDBERG:

10 A Well, in terms of key people that come to mind
11 first, they've brought aboard two assistant technical managers,
12 which in my personal opinion are very strong capable people.

13 They recently brought a third one, who I personally
14 don't have much prior knowledge about, but that person
15 looks strong as well.

16 They are currently out recruiting for their
17 new technical head.

18 They are in the process of -- well, they are
19 not in the process. Let me revise that.

20 They have recently put in place a new resident
21 construction manager, which carries the title of deputy
22 project manager.

23 This is a Mr. Jim Thompson, who replaced their
24 previous site manager, Mr. Ron Leasburg.

25 Now, Mr. Leasburg left voluntarily, but my

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1 perception is that Mr. Thompson will provide a stronger
2 hand in that he is a career construction man. Mr. Leasburg
3 was an engineer, whose experience in construction is somewhat
4 less than Mr. Thompson's.

5 Mr. Thompson has joined Brown & Root, having
6 recently participated in the management of construction
7 of another pressurized water reactor plant, and he brings
8 fresh, very applicable experience to the job.

9 He's a results-oriented fellow, and he's very
10 uncompromising. He manifests the qualities that I think
11 will help Brown & Root's construction activities.

12 These represent at least the current major
13 changes. I do know that there are some 22 positions that
14 Brown & Root is currently endeavoring to fill at various
15 middle technical management levels.

16 I've seen the list. I just don't happen to
17 have it with me.

18 Q Now, you mentioned a number of problems at
19 the job site. Did those problems involve the placement
20 of concrete?

21 BY WITNESS GOLDBERG:

22 A There certainly were some problems with placing
23 concrete. These are -- I'm now quoting from just the history
24 that preceded my personal observation.

25 I have no personal observations about problems

1 in placing concrete.

2 Q And were there also problems in welding?

3 BY WITNESS GOLDBERG:

4 A That appears to be, also, a matter of record.

5 Q Now, do you -- When you first came on board,
6 Mr. Goldberg, was HL&P properly overseeing Brown & Root's
7 engineering staff, in your opinion?

8 BY WITNESS GOLDBERG:

9 A I think in terms of the program, I would certainly
10 say yes. In terms of whether or not the program was being
11 fully implemented, I think mechanistically, the answer
12 to that would also be yes.

13 But I sensed that some activities that were
14 surfacing perhaps were not recognized in the seriousness
15 that they portended to my view versus perhaps the view
16 of others.

17 Q Can you expand on that last sentence of yours
18 more?

19 BY WITNESS GOLDBERG:

20 A Well, I think the first day I was on the job
21 I met with my staff of engineers that were assigned to
22 the project, and I was very interested in how they insured
23 that the design criteria that applied to the various systems,
24 including the safety-related systems, was being properly
25 implemented and reflected in the Brown & Root designs.

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1 In particular, I was vita'ly interested in
 2 whether this criteria was clearly written down on a system-
 3 by-system basis, whether or not this design considered
 4 all modes of operation, start-up, normal operation, shut-
 5 down, emergency, faulted and upset; and I was assured that
 6 that was the case.

7 That kind of assurance did cause me some concern,
 8 because if that were true, this would truly be the first
 9 nuclear powerplant which was in that good a shape.

10 So we probed further, and together we were
 11 able to discern that there were some areas that were not
 12 consistently being covered to that degree; and this represented,
 13 at least, the observation to me, that some of my people
 14 didn't appreciate the importance of that aspect of the
 15 engineering effort, and it certainly also suggested that
 16 they didn't have the depth of experience that I've accumulated
 17 over the years to appreciate how important that matter
 18 was.

19 Subsequent discussions with Brown & Root's
 20 head of engineering indicated that they were also, in parallel,
 21 becoming very sensitive to this prospect and had already
 22 undertaken a complete review of these design criteria,
 23 and that review is in progress.

24 But it certainly, in the context of your question,
 25 formed an opportunity to recognize that we needed to enhance

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1 by bringing aboard more experience the awareness of our
2 engineers of what was really important.

3 Q What was the tracking mechanism by which the
4 engineers at that time assured themselves that the design
5 criteria were being met in the actual design?

6 BY WITNESS GOLDBERG:

7 A Well, there are a number of key documents that
8 would reflect the design, if in fact it was being reflected
9 properly.

10 These would be system design descriptions;
11 the process and instrument diagrams, which represent
12 diagrammatically the design of the systems; the logic diagrams
13 that report the mode of operation of a system; and the
14 elementary electrical one-line wiring diagrams.

15 Now, our people are in fact in the review and
16 approval circuit of each of these documents. So that did
17 represent the key mechanism by which our people could review
18 and endeavor to assure themselves that the design criteria
19 was being implemented properly.

20 Q Were these reviews being properly carried out?

21 BY WITNESS GOLDBERG:

22 A To the extent that the procedures called for,
23 I believe that the program was being carried out. I believe,
24 however, that some of the engineers' awareness of some
25 of the omissions or inadequacies was not always being recognized.

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1 Q So there was a limitation in the capability of
2 the engineers doing the reviews?

3 BY WITNESS GOLDBERG:

4 A Yes, sir.

5 Q In the relation to the duties of Mr. Briskin
6 and your site manager, who will be Mr. Williams, who has
7 more authority within the organization, or are they on an
8 equal par?

9 BY WITNESS GOLDBERG:

10 A I believe they would be judged certainly on an
11 equal par.

12 Q You talked about the actions of Brown & Root
13 before in replacing or looking to adding positions.

14 Has Brown & Root been -- How responsive has
15 Brown & Root been to your concerns? Has it been a fight, or
16 have they been responsive -- or have they been readily
17 responsive?

18 BY WITNESS GOLDBERG:

19 A I think in the balance I believe they've been
20 most responsive certainly over the last, I'd estimate three
21 months, and before that time, I really wasn't making too
22 many demands on them because I was trying to understand where
23 the problems lie and what types of changes might be effected
24 that could make a difference in dealing with those problems.

25 Q We've had several people talk about programmatic

1 direction, and you used the term yourself on page 10 of your
2 testimony at line 17 -- 18.

3 What does programmatic direction mean to you?

4 BY WITNESS GOLDBERG:

5 A It is basically to provide the policies of how
6 we're going to carry out our relationship to insure that we
7 are satisfying our licensing commitments.

8 Q And when you talk about the direction, what
9 controls are there that you exercise to see that -- Must that --

10 First of all, must that direction be followed by
11 the contractor -- by the constructor?

12 BY WITNESS GOLDBERG:

13 A When we provide direction the contractor is
14 obligated to satisfy that direction. However, speaking from
15 past personal experience, whenever a contractor is of the
16 opinion that the direction he's being given will result in
17 either a product for which he's convinced will not satisfy
18 the requirements or might pose some personal safety hazard to
19 its employees, they unquestionably will take issue with such
20 direction.

21 Beyond those caveats, I think it is the
22 responsibility of a contractor to carry out the wishes of the
23 licensee.

24 Q How have you -- Have you taken any steps to
25 assure that the contractor is carrying out the programmatic

1 directions of HL&P since you assumed your position?

2 BY WITNESS GOLDBERG:

3 A Yes. And that's been done in a number of ways.

4 We talked last week about certain reviews that
5 HL&P conducts with Brown & Root relative to various engineering
6 and construction activities, and, in particular, emphasis
7 is placed on dealing with problematic type issues.

8 I tend to want to manage by exception in terms of
9 the real-term concerns, and, of course, we've already talked
10 about some of the things in terms of planning the activities
11 to preclude the occurrence of problems.

12 These meetings focus on the real issues affecting
13 the project, whether they be issues of procedure, issues of
14 procedure execution, issues of reported deficiencies and
15 what types of corrective actions will be undertaken to resolve
16 those deficiencies. We cover virtually the spectrum from
17 engineering, design, construction, and resolution of reported
18 problems.

19 BY MR. FRAZAR:

20 A Mr. Reiss, I don't want to interrupt your
21 cross-examination too lengthy of Mr. Goldberg. But I wish to
22 point out that the term programmatic direction has a rather
23 special connotation as it pertains to the quality assurance
24 program, and I'm sure that I'll get questions on that later.
25 But I just want to point that out.

1 Q When you -- You talk here on page 10 of your
2 testimony of the -- and that's question 11 and the answer
3 thereto -- of reviews designed to insure that Brown & Root
4 has considered the applicable industrial codes and standards,
5 regulatory requirements and HL&P's preferences. To some
6 extent you said you depend upon engineers to check the
7 diagrams and the documents that come forward.

8 Are there any checklists or matrixes performed
9 to assure that these matters are met?

10 BY WITNESS GOLDBERG:

11 A I believe in the context of identifying attributes
12 that need to be looked at, yes. We do identify in procedural
13 fashion the elements that an engineer should examine these
14 documents for.

15 While I do not believe they actually check off
16 a checklist, they do provide or we have provided them a laundry
17 list of features for which they should be examining the
18 documents for, and they do provide written comments to the
19 contractor on a per document basis.

20 Q Now, going down to question and answer 12, you
21 talk about the project engineering group reviews and approves
22 basic design documents.

23 Does your organization have any responsibility
24 to review implementing procedures that the -- that might be
25 used by the people in the field?

1 BY WITNESS GOLDBERG:

2 A Yes, we do.

3 Q And how do you go about reviewing those
4 procedures to assure yourself of the -- that they reflect
5 what is required by the basic design document?

6 BY WITNESS GOLDBERG:

7 A When an engineer assigned to HL&P's site
8 engineering staff is called upon to review a construction
9 procedure, he reviews the requirements in that procedure
10 as they serve to fill the requirements that might appear in a
11 Brown & Root specification which sets forth the requirements
12 that have to be satisfied in the performance of that activity.

13 So the procedure activity is compared in terms
14 of how those activities will satisfy the technical requirements
15 embodied in both the drawings and the associated technical
16 specifications.

17 Q In your reviews and the reviews that have been
18 performed in the last, I guess it is about seven months that
19 you've been on the project, seven, eight months, what
20 deficiencies have you found in the implementing procedures,
21 if any?

22 BY WITNESS GOLDBERG:

23 A I think I could say that there were two general
24 areas that I felt procedures could be improved, one being
25 that there were a number of instances where procedures

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1 embodied unrealistically severe requirements that went well
2 beyond the applicable code requirements, and this only
3 served to make the job of performance by construction all
4 the more difficult.

5 The other feature which has been receiving a
6 lot of attention by Brown & Root is to simplify the method
7 of procedural change. Now, this does have a strong bearing
8 on quality of work. We have to develop detailed procedures
9 to govern the performance of the job. But like any other
10 activity, from time to time procedures are found to be lacking
11 in some appreciation for the physicalities of a problem, and
12 this can be uncovered during the execution of the procedure
13 itself.

14 If you have in place the ability to have
15 engineers review the problem and make prompt changes to that
16 procedure, conduct the appropriate work practice session
17 with the craft people to acquaint them with the change, one
18 can get on with the job in a relatively efficient way and
19 at all times not be working in violation or in contrast to
20 the procedural requirements.

21 So the presence of a very onerous change program,
22 while by itself I can't say to what degree it may have caused
23 people to violate the procedure, there's no question in my
24 mind based on my experience that that can certainly contribute
25 to problems. You have to be able to develop procedures and

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from time to time quickly and efficiently modify them where appropriate to support a general construction program of trying to work to procedures.

Q How has the organization been changed to facilitate the modifications of procedures of which you just talked?

BY WITNESS GOLDBERG:

A The first step was to establish almost a Magna Carta, if you will, of who was responsible for the preparation of those procedures and, accordingly, for the appropriate changes thereto.

It seems that these procedures, while they are basically prepared by construction, they are reviewed and concurred in by both engineering and quality assurance. And I think that when people get very close to the day-to-day work they sometimes can get a little confused as to their roles, and they all want to help construction write these procedures and change these procedures. And I believe that unintentionally that became a very counterproductive involvement because it wasn't altogether clear who was really building the plant, not in the real sense of construction but in the sense of who is preparing those procedures.

So we were able to get everyone to accept clearly that Brown & Root Construction had that basic responsibility to prepare those procedures, and then to the extent that both

1 the engineers and quality assurance personnel believed
2 changes were necessary, those were accommodated through
3 a review process. But there were some instances, I suspect
4 from what I've been told, that there were attempts made
5 on a committee basis to prepare these procedures, and it
6 was very, very difficult to get procedures prepared or
7 changed.

8 Q Does quality assurance staff have a veto over
9 the procedures?

10 BY WITNESS GOLDBERG:

11 A They do.

12 Q And what is the extent of the review of the
13 procedures to see that they meet the design requirements?

14 BY WITNESS GOLDBERG:

15 A If you would like it answered in the context
16 of quality assurance, I think perhaps Mr. --

17 Q Now --

18 BY WITNESS GOLDBERG:

19 A Or do you want it from the standpoint of the
20 engineer's review?

21 Q Right. Design review. Design engineer review.

22 BY WITNESS GOLDBERG:

23 A I could be in error, but I thought I had answered
24 that question earlier.

25 Q I think you did. I think you did. It does come

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1 back to me that you answered it.

2 MR. NEWMAN: No. I think the -- Excuse me. I
3 think the last question was does the QA staff have a veto
4 over procedures.

5 MR. REIS: Have a veto over procedures, and the
6 answer was yes. And that's all I want to ask at this point
7 on that.

8 BY MR. REIS:

9 Q You say changes are necessary to procedures and
10 they have to at times be made quickly in order to facilitate
11 the work.

12 What checks are there to assure that the changed
13 procedures will conform with the design of the facility?

14 BY WITNESS GOLDBERG:

15 A Well, the changes must receive the same review
16 as that of the original procedure. So, basically, there
17 will be both an engineering and a quality assurance review
18 of the changes.

19 Q You said before that quality assurance has a veto.

20 Does engineering have a veto?

21 BY WITNESS GOLDBERG:

22 A Yes, they do.

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1 JUDGE BECHHOEFER: Mr. Goldberg, just what is change
2 over? Was that over a change in engineering and design
3 procedures, changes in that type of thing?

4 WITNESS GOLDBERG: Well, Chairman Bechhoefer, the
5 point I was trying to make was relative to construction
6 procedures.

7 If engineering, upon review of a construction
8 procedure, believes that by performing the work activities in
9 accordance with that procedure will not produce a product that
10 satisfies the technical requirements, then the engineers would
11 not approve that procedure, and their approval, along with that
12 of quality assurance, is essential for this procedure to be
13 valid for use.

14 JUDGE BECHHOEFER: Would the quality assurance
15 veto be based on -- Mr. Frazar, maybe you can answer this
16 better.

17 Would that be based on the failure of the proposed
18 procedure to produce quality work, or is it a difficulty of
19 inspection, or what kind of thing?

20 WITNESS FRAZAR: I think you've covered the water-
21 front. The procedures, for the most part, that are developed
22 by the construction organization are based upon engineering
23 specifications.

24 Those engineering specifications identify the
25 basic design criteria to which the plant must be constructed.

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1 The procedures then implement those design criteria
 2 during the quality assurance review of the procedures. I
 3 recognize that many of us are degreed engineers as well as
 4 experienced in codes and standards and in some cases design
 5 ourselves.

6 We review the procedures against the requirements
 7 of the pertinent codes and standards and the specifications,
 8 and we also review those procedures to verify that included in
 9 the procedures are clear acceptance and rejection criteria that
 10 form the basis for the actions to be performed by both the
 11 construction and the quality control personnel as the work
 12 proceeds in the field.

13 JUDGE BECHHOEFER: If you should veto a proposed
 14 change, would you normally suggest what alternative should be
 15 followed?

16 WITNESS FRAZAR: Yes, sir, we endeavor to work in
 17 a professional manner with the construction and engineering
 18 personnel to resolve any apparent conflicts that have developed
 19 out of our review of the procedures.

20 JUDGE BECHHOEFER: Thank you.

21 Sorry for the interruption.

22 MR. REIS: That's all right, Your Honor.

23 BY MR. REIS:

24 Q Mr. Goldberg, on Page 12, in Question 14 you're
 25 asked a question about HL&P. I'd like to rephrase the question

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1 and ask you, are you able to express an opinion on how
 2 Brown & Root's current management of design, and I might add
 3 engineering and construction on this project compares to
 4 generally accepted practices for nuclear construction?

5 BY WITNESS GOLDBERG:

6 A I think I tried to characterize last week that
 7 I'm pretty much of the school that however things are there's
 8 always opportunities to make them better.

9 Now, I believe that Brown & Root has made some
 10 substantial improvements, and most of this improvement has
 11 centered around the introduction of certain people.

12 As I mentioned earlier, there is still a number
 13 of spots that they have yet to provide some additional
 14 required resources, so I certainly would have to state that
 15 I'm not satisfied. I would hope that their management is not
 16 satisfied because I think there is substantial improvements
 17 that can yet be made.

18 In terms of whether or not they're meeting the
 19 minimum standards necessary, I would say that in any case where
 20 we have identified they're not, whether it be by an engineering
 21 review and observation or whether it has been by a quality
 22 assurance review and observation, these matters are being
 23 brought to the attention of their management and they will be
 24 corrected.

25 We stand to get this job done faster and more

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1 efficiently as fewer mistakes are made, so that end we're
2 determined to encourage Brown & Root to acquire the resources
3 to improve the quality of their effort.

4 Q Now, as to design, what are the principal areas
5 where you have found them lacking?

6 BY WITNESS GOLDBERG:

7 A We and Brown & Root have identified some areas in
8 need relative to heating, ventilation and air conditioning.

9 We have identified some specific areas whereby
10 certain faulted condition loads were not considered in some of
11 the designs. These designs will have to be re-examined, taking
12 into account these additional heat loads.

13 We've identified some areas and Brown & Root has
14 also independently identified some areas where shielding
15 analyses were performed with the premise that they did not
16 relate to something that was safety related, and certain
17 shielding calculations may very well not be safety related
18 but unfortunately there are some that are, and to the extent
19 that there are these calculations that were not treated as
20 safety related, they have to be re-examined because there is a
21 difference in the review process of calculations if you treat it
22 as safety related versus non-safety related.

23 So those areas are being re-examined by Brown &
24 Root. We have no knowledge that the calculations are wrong,
25 but we question the veracity of the review process, and

1 therefore there is a chance that it could turn up something
2 that has previously gone undetected.

3 Q In order to clear up the record, you said
4 veracity. You don't mean veracity in the sense of honesty?

5 BY WITNESS GOLDBERG:

6 A No. I'm sorry. I may have chosen the wrong word.
7 I meant in terms of reliability or validity of the review.

8 Q Now, as far as construction in contrast with
9 design, where have you found principal deficiencies in the
10 Brown & Root operations?

11 A I've been disappointed, as I said earlier, with
12 the procedural aspect, which I think certainly can be a very
13 counterproductive element. It certainly can be contributing
14 to some of the frustrations of the work force.

15 Once you ask a group of men to build something
16 and you hand them the procedure and the material and the
17 drawings and you've trained them and they're ready to roll,
18 and this is that long-awaited day to get started, and then,
19 lo and behold, they're 15 minutes into the job and they
20 encounter a problem that requires a procedural change.

21 If they have to stand around and wait a couple of
22 days while the -- what do I call it -- the infinite wheels of
23 progress grind away, they get frustrated. So we see that as a
24 very important element that contributes not only to the quality
25 of the job but to the attitudes of the people that are trying

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19-4 1 to build the plant.

2 Another area that we have had some concerns about,
3 which at the moment represent a larger concern for the economics
4 rather than for quality, deal with the work sequencing.

5 Whenever engineering information is lacking there
6 are two ways of dealing with it. You either wait for the
7 information or you try to work around it.

8 There have been too many instances where people
9 have been working around some of these missing elements, and
10 this is a very inefficient way of trying to build the power
11 plant. You just can't commit resources in a very orderly and
12 businesslike fashion.

13 We've certainly been concerned about this, and
14 certainly if we didn't do something about it, perhaps years
15 down the road it might have been at least contributory to some
16 future problem of maybe denying adequate access to man to
17 perform some of the tasks that are now being performed out of
18 sequence by having worked around some of these bottlenecks.

19 So we're working with Brown & Root construction
20 management to bring a stronger discipline to the people
21 responsible for deciding the work sequencing.

22 To Brown & Root's credit, they have certainly
23 brought to bear a far more seasoned planning team to help
24 perform the work planning, to try to put the engineering and
25 construction activities in better synchronization, and it also

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1 serves to provide some visibility to quality control so that
 2 they can plan for their support, so that they, needless to say,
 3 do not become in a situation where the resources needed for
 4 their support have not been defined in sufficient time to
 5 enable them to provide those resources.

6 Q Does this sequence and coordination of engineering
 7 and construction, and I take it from what you're saying in
 8 some instances construction was getting ahead of engineering;
 9 is that what you're generally saying?

10 BY WITNESS GOLDBERG:

11 A They never get ahead, but certainly when they
 12 reach the point where they're waiting on engineering, that's
 13 certainly a very inefficient situation.

14 Q Can that have any effects on the safety of the
 15 construction of the project?

16 BY WITNESS GOLDBERG:

17 A I would not think that should normally be a
 18 concern, but construction always has to be sensitive to
 19 performance of work that cannot be completed and they have
 20 to establish to what degree they can proceed without
 21 completion and still have a situation which does not pose a
 22 safety concern.

23 Now, we're talking about physical safety to
 24 workers, I assume.

25 Q No, I was talking about an ultimate safety from

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the point of view of the responsibilities of the NRC, health and safety matters.

BY WITNESS GOLDBERG:

A. Only to the extent that I observed previously, that in the event you don't work in proper sequence you might create a situation where you increase the difficulty for construction to perform the task properly.

For example, if a certain valve, for example, was missing and work was allowed to continue around that work area to the extent that access for properly welding that valve at a later date became extremely congested, this increases the likelihood for workmanship errors which undoubtedly would be picked up by quality assurance by the quality control inspections, but notwithstanding we're just taxing the whole operation by allowing the work to proceed in that fashion.

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1 Q On Page 13, Question 16, the question is put
2 to you: "From your own personal observation, is HL&P's
3 management program working effectively?"

4 And your answer is that it is fulfilling
5 appropriately its responsibility.

6 Can you contrast what the difference is in
7 your mind between effectively and fulfilling appropriately
8 its responsibility?

9 BY WITNESS GOLDBERG:

10 A I believe in the context of having an ap-
11 preciation for the things that it should be sensitive
12 to, and some of the manners that those sensitivities can
13 be carried out, or can be explored, I have not found
14 HL&P lacking either in appreciation for some of the
15 systems and some of the numbers of people that it might
16 take to do this job.

17 If there was any one area that I feel we have
18 to improve, I've identified earlier; and that is, that
19 some of the levels of experience need to be strengthened
20 so that the implementation of the programs that we
21 have established can be carried out with a greater degree
22 of success.

23 Q Well, let me -- In speaking of the organiza-
24 tion are you free at any time to go to any level of
25 management within HL&P with your concerns?

1 BY WITNESS GOLDBERG:

2 A. Absolutely.

3 Q. And do you have to touch base with Mr. Oprea
4 before you do that, or can you just do it on your own?

5 BY WITNESS GOLDBERG:

6 A. I'd like to do that as a courtesy. Mr. Oprea
7 is interested, involved and very supportive of what I've
8 been trying to do.

9 Any time that Mr. Oprea is not available,
10 he's out of town on business, I can bring those matters
11 directly to the attention of Mr. Jordan and then fill Mr.
12 Oprea in at my earliest convenience.

13 Q. In that connection, aside from the weekly
14 meetings that Mr. Jordan testified to, where the officers
15 of the corporation meet, how often do you meet with Mr.
16 Jordan?

17 BY WITNESS GOLDBERG:

18 A. I would venture to say, in addition to that
19 meeting, we probably have at least one meeting each
20 week. That's in addition to that regular Monday meeting.

21 Q. And what are the general subject matters of
22 that meeting, or are they on a special subject?

23 BY WITNESS GOLDBERG:

24 A. They're generally keyed to specific issues.
25 Sometimes dealing with organizational issues or staffing

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1 issues within HL&P, and sometimes dealing with matters
2 involving Brown & Root for which his knowledge and
3 involvement can be very useful to dealing with these
4 issues.

5 Q Have you ever gone to -- You mention that
6 you can personally communicate with whatever level of
7 Brown & Root management you feel is required. Have you
8 ever gone --

9 What levels of Brown & Root management have you
10 gone to in the past?

11 BY WITNESS GOLDBERG:

12 A Routinely, I've had dealings with their project
13 manager, their senior vice president for engineering --

14 Q What is his name, please?

15 BY WITNESS GOLDBERG:

16 A Mr. Saltarelli.

17 Frequent meetings with their group vice
18 president for power, Mr. William Rice.

19 Less frequent meetings with Mr. Peeper, who
20 is their senior executive vice president.

21 And probably about the same number of
22 occasions to meet with Mr. Fihan, their chief executive
23 officer.

24 Q Mr. Goldberg, have you ever had any experience
25 in the past where there has been undue friction between the

1 quality control personnel on the job and the construction personnel
2 the crafts performing the work?

3 MR. HAGER: Excuse me. Could we get a clarification
4 if Mr. Reis is referring to the past before October, before
5 Mr. Goldberg joined HL&P?

6 MR. REIS: Yes. That was before Mr. Goldberg
7 joined HL&P.

8 MR. NEWMAN: Would this be friction on other
9 jobs?

10 MR. REIS: Generally, and I'm going to bring
11 it right.... If he has knowledge.

12 WITNESS GOLDBERG: I can recall, and probably
13 it was in the mid-'60's when we were building nuclear
14 submarines, they were truly a product that was zero defect
15 in the absolute sense of the word; and I can remember numerous
16 instances of differences of opinion between quality control
17 and construction; and sometimes these opinions got a little
18 personal.

19 I do not recall any instance where these issues
20 were some manifestation of real hate and discontent, but
21 rather, given the right circumstances of the working environment,
22 which sometimes could be very warm, very tiring, that from
23 time to time people would get a little bit testy over these
24 issues.

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1 BY MR. REIS:

2 Q In your experience, what is the most efficacious
3 ways of reducing friction? What are the most efficacious
4 ways of reducing friction, if you can testify to that matter?

5 BY WITNESS GOLDBERG:

6 A Well, for the specific example that I can recollect,
7 it was usually don't try to settle any real tough issues
8 when you're tired.

9 I think people's patience is invariably something
10 less than it ordinarily would be. If you are suggesting
11 about any experience whereby people just out-and-out dislike
12 one another and couldn't work together, I have not had
13 that experience.

14 MR. REIS: That's all I have.

15 (Board conference.)
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JUDGE BECHHOEFER: The Board thinks it that it might be somewhat more expeditious if we break at this time and start the Board questioning the first thing in the morning. It is approximately a quarter of six.

Any further matters before we adjourn for the evening.

Oh, one further thing, I would like for our purposes to have an indication of which of the names on the subpoena list are to be treated confidentially.

MR. JORDAN: Yes, sir, Your Honor. I'm afraid -- I mean that is a little slip in my list book. Those designations are back in my motel room.

But, we'll give you the list the first thing in the morning.

JUDGE BECHHOEFER: The first thing before we start --

MR. REIS: Do you want to take it off of my list that is here, which I think I copied from you. If you can read my list.

JUDGE BECHHOEFER: It is not material that we get it tonight, but before we start any discussion of it we would like to have it.

MR. AXELRAD: Mr. Chairman, just two matters, please.

One, is that the parties will be getting

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1 together after this adjournment this evening to see if we
2 can get together and make some recommendations to the
3 Board tomorrow morning as to how the argument with
4 respect to the subpoena list should be conducted, as
5 we had promised to do.

6 JUDGE BECHHOEFER: Fine. If you could reach
7 agreement on the whole list that would be, probably, the
8 most satisfactory.

9 MR. AXELRAD: We will try.

10 I'm not very confident on that part of it.

11 The other thing I wanted to ask is that
12 Mr. Frazar who is both on this panel, and on the Oprea
13 panel which will return after this panel is completed,
14 has a meeting scheduled in Washington, I believe, on
15 Thursday, which he is planning to attend.

16 And -- All right. Prior to deciding whether
17 we can let Mr. Frazar attend that meeting, we did want
18 to inquire as to whether it is expected by the parties that
19 the cross-examination of Mr. Wilson and Mr. Kirkland,
20 which is scheduled to begin on Thursday morning with
21 respect to their testimony on structural backfill and the
22 report of the expert committee on structural backfill;
23 whether it was expected that that cross-examination will
24 take the entire day.

25 Perhaps, if the parties can let the Board know

1 tomorrow morning, the Board can tell us based upon their
2 estimates whether it is safe to assume whether it will
3 take the entire day so that Mr. Frazar's presence will
4 not be missed.

5 (Bench Conference.)

6 MR. JORDAN: I think, actually, that last
7 week we said that we would try to take a look at that
8 and try to give you an estimate.

9 So, from my point of view, I will be glad to
10 take a look at it.

11 And, see what estimate I can give.

12 JUDGE BECHHOEFER: Another alternative which
13 you may wish to consider whether any other parts of the
14 Oprea testimony we could cross-examine temporarily without
15 Mr. Frazar.

16 MR. AXELRAD: Well, that would certainly be
17 another possibility; but in reaching our decision it would
18 be helpful to us if we did get from the Board on the
19 basis of what he receives from the parties and from
20 its own interests in the subject matter and its own
21 indication of whether or not that testimony would take one
22 day or less.

23 Because if it took significantly less than
24 one day, we might choose to have Mr. Frazar break that
25 commitment and --

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JUDGE BECHHOEFER: Yes. Even if Mr. Frazar
would not be here, he could be still open for questions after
he returned --

MR. AXELRAD: That is correct.

JUDGE BECHHOEFER: -- on areas where he might
have something to add.

So, I think there are a number of considerations
at you could take into account.

MR. AXELRAD: Fine.

But, in any event we wouldn't want to surprise
the Board on Thursday if Mr. Frazar were not here and
the Board expected him to be here.

JUDGE BECHHOEFER: All right.

MR. NEWMAN: Mr. Chairman, just before we
close, I have been asked to advise the Board that the
representative for the State of Texas will not be here
until about 9:30 tomorrow morning; and has asked that
any decision relating to the subpoena for State officials
not be decided upon until the State's representative can
be here.

That's the entire substance of the message
that has been given to me.

(Bench Conference.)

MR. REIS: Mr. Chairman, could the members of

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1 the panel step down. The look uncomfotable sitting there.

2 JUDGE BECHHOEFER: Yes.

3 We can either have preliminary discussions
4 or we can start to continue cross-examination of this
5 panel before the representative of the State of Texas gets
6 here.

7 I don't think it is crucial that we start
8 right at nine, so we'll be flexible on that.

9 We'll be here at nine, but we'll be flexible
10 as to what we do right at 9:00.

11 Mr. Reis?

12 MR. REIS: No. I don't know if --

13 JUDGE BECHHOEFER: We're adjourned until
14 9:00 in the morning.

15 (Whereupon, at 6:00 p.m., the hearing
16 adjourned, to reconvene on Wednesday,
17 May 20, 1981, at 9:00 a.m. in the
18 same hearing room.)

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This is to certify that the attached proceedings before the
NUCLEAR REGULATORY COMMISSION
HOUSTON LIGHTING & POWER COMPANY, ET AL.
in the matter of:
South Texas Nuclear Project Units 1 and 2

DATE of proceedings: May 19, 1981

DOCKET Number: 50-498 OL; 50-499 OL

PLACE of proceedings: Houston, Texas

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

Lagailda Barnes
Official Reporter (Typed)

Lagailda Barnes
Official Reporter (Signature)