

# UNITED STATES NUCLEAR REGULATORY COMMISSION

## ORIGINAL

IN THE MATTER OF:  
EVIDENTIARY HEARING

DOCKET NO: STN 50-498-OL  
STN 50-499-OL

HOUSTON LIGHTING AND POWER COMPANY,  
et al.  
(South Texas Project, Units 1 and 2)

LOCATION: HOUSTON, TEXAS

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2 UNITED STATES OF AMERICA  
3 NUCLEAR REGULATORY COMMISSION  
4 BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

5 -----X

6 In the Matter of: DOCKET NO.  
7 HOUSTON LIGHTING AND POWER : STN-50-498-OL  
8 COMPANY, ET AL., : STN-50-499-OL  
9 (South Texas Project Units 1 & 2 :  
10 -----X

11 University of Houston  
12 Teaching Unit II, #215  
13 Houston, Texas  
14  
15

16 Thursday, 18 July 1985  
17

18 The hearing in the above-entitled matter was  
19 convened, pursuant to adjournment, at 9:12 a.m.,

20 BEFORE:

21 JUDGE CHARLES BECHHOEFER, Chairman,  
22 Atomic Safety and Licensing Board.  
23 JUDGE JAMES C. LAMB, Member,  
24 Atomic Safety and Licensing Board.  
25



1 JUDGE FREDERICK J. SHON, Member,  
2 Atomic Safety and Licensing Board.  
3

4 APPEARANCES:

5 On behalf of the Applicants:

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7 JACK R. NEWMAN, Esq.,

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14 On behalf of the Nuclear Regulatory Commission Staff:

15 EDWIN J. REIS, Esq.,

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19 On behalf of the Intervenor:

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22 Washington, D.C. 20008

23 Representative for Citizens Concerned About  
24 Nuclear Power.  
25

## C O N T E N T S

WITNESSES:	DIRECT	CROSS	BOARD	REDIRECT	RECROSS
JEROME H. GOLDBERG	-	-	12594	-	12618
			12675		12664
					12689

DR. JAMES R. SUMPTER	12698	12700	-	-	-
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EXHIBITS:	FOR ID	IN EVD.
Applicant's Exhibit 70	12675	
CCANP Exhibit 92	12707	
CCANP Exhibit 93	12756	12760
CCANP Exhibit 94	12786	12787
CCANP Exhibit 95	12788	12794
CCANP Exhibit 96	12799	
CCANP Exhibit 97	12800	

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

JUDGE BECHHOEFER: Good morning, ladies and gentleman. Before we -- the Board has a few more questions of Mr. Goldberg. But before we start that, are there any preliminary matters?

MR. AXELRAD: We have none, Mr. Chairman.

MR. SINKIN: Yes, Mr. Chairman; I have sent a letter to the Board and the parties that we were attempting to get the transcripts of the radio program about the seepage at the cooling lakes. I was able yesterday to secure those transcripts and as soon as we have a chance to get some time, we will be proceeding to file the motion for new contention that we have mentioned before.

That's all I have, Mr. Chairman.

JUDGE BECHHOEFER: Okay, anything further?

JEROME H. GOLDBERG

testified further upon his oath as follows:

BOARD EXAMINATION CONTINUED

BY JUDGE BECHHOEFER:

Q Mr. Goldberg, do you recall yesterday you were asked several questions about whether you had any reluctance to release the Quadrex report to intervenors or something along that line, or whether you had

1 considered releasing -- considered intervenors in your  
2 decisions not to at least publicize the report prior  
3 to September of 1981?

4 MR. NEWMAN: Mr. Chairman, is there a reference  
5 in the transcript that we could help the witness look at?  
6 I'm concerned about characterizations like "decision not  
7 to publicise." There may be --

8 JUDGE BECHHOEFER: I have just received the  
9 transcript and I haven't had a chance to look through  
10 where it was.

11 MR. NEWMAN: I think these questions are --

12 MR. AXELRAD: There are copies of the  
13 transcript available.

14 JUDGE BECHHOEFER: I just got it. I have not  
15 had a chance -- when I was looking through these  
16 questions, I did not -- I had recalled Mr. Goldberg  
17 saying that intervenors did not play any part in their  
18 decision to either publicize or not publicize that to the  
19 extent that has happened. Maybe my recollection is  
20 incorrect.

21 MR. SINKIN: Mr. Chairman, perhaps I can help.

22 JUDGE BECHHOEFER: You were asking --

23 MR. SINKIN: I was asking questions. I asked  
24 about myself, and we talked in terms of did he think of  
25 Mr. Sinkin when he was going to get the report that

1 publicly or not, and he said I was not in his mind, and I  
2 think you have abstracted that to "intervenors."

3 JUDGE BECHHOEFER: That is the dialogue I was  
4 referring to in any event.

5 MR. AXELRAD: May I make a suggestion, Mr.  
6 Chairman. Without characterizing the previous testimony,  
7 perhaps if you have a direct question.

8 JUDGE BECHHOEFER: I just wanted to use it as a  
9 starting point. I did not really want to characterize it  
10 or do anything like that. I just wanted to provide a  
11 frame of reference. I would like Mr. Goldberg to explain  
12 some language which appears in the -- well, it's document  
13 No. 44 which was sent to us. It's a management meeting  
14 of June 26. I have a copy, and if it would be useful, I  
15 would like Mr. Goldberg just to comment on one phrase in  
16 here which I have marked, but if you have a copy, I can  
17 refer to that.

18 MR. AXELRAD: We have a copy of it, Mr.  
19 Chairman.

20 I have handed the witness a copy of the  
21 document that the Chairman has referred to.

22 JUDGE BECHHOEFER: I understand that to be the  
23 minutes or notes of the management meeting of June 26,  
24 '81.

25 MR. AXELRAD: As we have explained before, Mr.



1 Chairman and as we indicated in the identification of the  
2 documents, these were the notes of Mr. Thrash.

3 JUDGE BECHHOEFER: That's correct.

4 MR. AXELRAD: Okay. They were not the minutes  
5 but the notes.

6 JUDGE BECHHOEFER: I'm sorry, yes. That's  
7 correct.

8 Q (By Judge Bechhoefer) Mr. Goldberg, could you  
9 comment on what the meaning of the phrase which appears  
10 opposite the name of Mr. Poston about slightly below the  
11 middle of the page, where it says: Re copies to  
12 intervenors? Were you present when that portion of the  
13 discussion was going on?

14 A I'm sure I was present, Mr. Chairman. I was at  
15 that meeting. I'm not -- I'm just looking at this and  
16 I'm not able to decipher any of Mr. Thrash's notes per  
17 se. These are notes he writes to himself and from which  
18 he prepares the minutes. I have no idea what Mr. Poston  
19 might have said.

20 There was not any dialogue that I can  
21 personally recall that addresses intervenors. There may  
22 have been a question about it's hard to know what there  
23 could have been a question about. I think Mr. Poston is  
24 going to have to hope that he can recall what he said  
25 because I can't.

1 Q Do you know what it means two lines farther  
2 down where it said: "Austin reporter had asked Gold,"  
3 I assume that's you, "Gold about"?

4 A Mr. Chairman, I think I characterized yesterday  
5 in testimony before the Board that I was approached by a  
6 reporter during the week of the hearings and I'm just  
7 trying to get my bearings on when was this set of notes  
8 taken.

9 Q The transmittal to us, at least, indicates that  
10 it was June 26.

11 A It's probably making reference to that same  
12 hing.

13 I think Mr. Hancock who represented the City of  
14 Austin on the management committee, he may have -- he may  
15 have known independent of me that a reporter in Austin  
16 was aware that the Quadrex report existed, and then again  
17 it may have been just a further paraphrasing of a  
18 conversation I may have had with him that a reporter from  
19 Austin had approached me during the hearings.

20 It's hard to construct what may have been said  
21 about it. I'm sure it relates to the fact that there was  
22 a reporter, I am reasonably sure he was from the City of  
23 Austin, and he did seem to know about the Quadrex report.  
24 And it was first brought to my attention by questions  
25 from that reporter during that week of the hearings in



1 May. I think it was the week of May 11th, 1981.

2 Q I see, so this is not an additional communique  
3 with reporters that may have occurred at the end of June?

4 A Well, I couldn't tell with absolutely certainty  
5 but I am of the mind that it was probably related to the  
6 same thing. But I can't recall the context that this may  
7 have come up at that meeting in June, whether it was Mr.  
8 Poston bringing the matter to my attention, whether he  
9 was recounting a conversation I may have had with him, I  
10 just don't know.

11 MR. AXELRAD: Mr. Chairman, Mr. Goldberg said  
12 Mr. Poston, I believe --

13 THE WITNESS: I'm sorry, I meant Mr. Hancock,  
14 thank you, Mr. Hancock who represented the City of  
15 Austin.

16 Q (By Judge Bechhoefer) Mr. Goldberg, turn to  
17 the bottom of page six of your testimony.

18 MR. AXELRAD: Mr. Chairman, could you repeat  
19 that, please.

20 JUDGE BECHHOEFER: I'm sorry, the bottom of  
21 page six of Mr. Goldberg's present testimony.

22 Q (By Judge Bechhoefer) In the sentence that  
23 says that you were not interested in an analysis of B&R's  
24 procedures, do you believe that the Quadrex report as it  
25 turned out had such an analysis of at least some of the

1 procedures?

2 A Well, there's no question that the report  
3 touched on information that could have an influence on  
4 procedures. For example, how activities were being  
5 carried out, if there were better ways at which these  
6 matters could be addressed would undoubtedly have an  
7 influence in procedures, all of the quality related  
8 activities for the most part are documented in a  
9 procedure and any time anybody chooses to make any  
10 adjustment to the manner in which the work will be  
11 performed, go undoubtedly have an influence on the  
12 procedures.

13 So any instance where Quadrex highlighted a  
14 practice which it might well have been adequate but there  
15 could clearly be a signal that there is room for  
16 improvement would have an ultimate impact on procedures.

17 Q Did you think that Quadrex was going beyond  
18 it's charter when they made comments or findings to that  
19 effect?

20 A Well, I think in a broad sense the Quadrex  
21 review turned out to a lot different than its originally  
22 stated purpose. The fundamental thrust of what I wanted  
23 to do was to use other pairs of eyes, if you will, to  
24 help get a quick perspective as to where the engineering  
25 was on South Texas Project.

1           And the areas that I believed were the -- or  
2 the areas that deserved the most attention were related  
3 to the nuclear aspects.

4           This, as we have discussed on other occasions,  
5 was Brown & Root's first nuclear job. And I felt that if  
6 they were struggling in any area, that would be more than  
7 likely the place we would be able to spot it.

8           When Quadrex framed the original set of  
9 questions to explore the job status, that was my first  
10 feeling that maybe this review was going off in a totally  
11 different vein. The question seemed terribly detailed to  
12 just be able to go out there and examine the status of  
13 the job and look at the general approaches that were  
14 being used to carry out the work as it might give me the  
15 benchmark as to how sophisticated if you will, was Brown  
16 & Root, how much aware were they as to the methods that  
17 people had developed in the industry and that seemed to  
18 be working well.

19           So I guess it's fair to say that I got a lot of  
20 details that weren't in the mainstream of the original  
21 premise or purpose of the review. I wasn't -- at that  
22 juncture, I went interested in knowing to the Nth detail  
23 about a particular activity.

24           The whole purpose of the review was to try to  
25 get the status of the job and more importantly, to get a

1 feel for the depth and the degrees of sophistication, the  
2 depth experience and levels of sophistication currently  
3 in use by Brown & Root.

4 Q Now yesterday -- turn to Page 9. I don't  
5 really have too much of a question here, but there was  
6 some -- I just wanted to point out that there was a lot  
7 of discussion about the word "orderly" yesterday in  
8 connection with some questions from Mr. Sinkin. The word  
9 "orderly" is used toward the bottom of the page here, and  
10 what did you have in mind when you used "orderly" in this  
11 context?

12 This may help to pinpoint some of the  
13 discussion of the term "orderly" which we had yesterday.

14 A The frame of reference here in the use of the  
15 word "orderly" is in a businesslike manner; and it -- you  
16 have to be careful in the use because if you read, I  
17 think it's ANSI N45 2.11 where it talks about design  
18 procedures and I think they use the expression that the  
19 that design activity should be carried out in an orderly  
20 fashion, but that's an infrastructural type of usage on  
21 how one goes about performing a particular design  
22 activity, you have a procedure and you should have it  
23 organized in such a way that you can carry out the  
24 function in an orderly fashion.

25 In the context that was used here, it was more

1 in the context of an efficient engineering effort, one  
2 that would give us a quality product in a minimum amount  
3 of time at least cost.

4 Q When Mr. Sinkin asked you questions using the  
5 word "orderly" yesterday, is that the sense in which you  
6 used the term or believed he was using the term?

7 A Well, he also, as I recall, got into the  
8 context of when an activity was carried out. if I  
9 remember the dialogue. And I think I indicated that  
10 there clearly was a practical limit as to when one could  
11 start something and still call the process orderly.

12 I used as an example, that if one didn't get  
13 around to performing an engineering function, it might  
14 result in the development of a feature that needed to be  
15 known before one poured concrete, I would hardly call  
16 that a very orderly process from any perspective.

17 Q But that was not the sense you were using it  
18 here?

19 A No, sir.

20 Q On page 52 of your testimony, I believe that  
21 there was some discussion yesterday about the words that  
22 you used here around lines --

23 MR. SINKIN: I'm sorry, I can't hear you.

24 Q (By Judge Bechhoefer) Starting about line 19,  
25 where you mention that the report could be misread or



1 quoted out of context. Was that a reason that you  
2 assigned for not reporting it under -- or the report  
3 under 50.55(e)?

4 A Main reason it wasn't reported under 50.55(e)  
5 is because it didn't, in our view, have the  
6 representative facts to support it being of that broad  
7 concern.

8 To have done it gratuitously, would clearly  
9 have caused some of the concerns that I really feel are  
10 related to the report. It is, as I stated earlier, I  
11 think if you just picked that report up and read it and  
12 take no time to evaluate what it really means, you come  
13 away with a very concerned feeling and --

14 Q I recognize that your discussion yesterday was  
15 in the context of gratuitous release. But do you  
16 consider this a reason why the report didn't fall under  
17 50.55(e)?

18 A No. As I tried to just reply, there wasn't the  
19 substance in our view that justified putting that report  
20 in as a broad indictment of engineering. We did not did  
21 not see it in that light once the evaluations had taken  
22 place.

23 Primary reason for not reporting it under  
24 50.55(e) was that we did not see a technical basis that  
25 suggested that this was in fact, on a broad scale, an

1 indictment of Brown & Root engineering. We did not find  
2 that the engineering of Brown & Root was flawed.

3 Interestingly enough, of the three matters that  
4 we reported, the shielding was withdrawn, the subsequent  
5 reviews of the Brown & Root computer code verification  
6 which Brown & Root maintained was a bookkeeping problem  
7 but we didn't know that for sure, it represented a  
8 serious uncertainty, we have not found in the reviews  
9 that were conducted by Brown & Root before they were  
10 removed from the job, any instance where that did prove  
11 to be a deficiency. We didn't find a deficiency. We  
12 found what we saw as a breakdown in quality assurance,  
13 but we never found the deficiency. The system we felt  
14 was weak, but it didn't result in a deficiency.

15 So there isn't much meat on the bones; there's  
16 a lot of potential but not much meat on the bones in  
17 terms of just looking for facts to back up what the  
18 report says.

19 Q Was this same -- these same reasons here,  
20 misread or quoted out of context, et cetera, did that  
21 enter into your consideration of whether to send the  
22 report to the Board?

23 A No, sir. I think that was in the context of  
24 when the NRC asked me am I going to send them the report  
25 as a gratuitous report and I said "No, I'm not going to



1 send it as a gratuitous report, the report's on file and  
2 it's available for your review," and that would have  
3 provided the environment for the NRC to review the report  
4 to whatever extent it felt necessary. I saw that it was --  
5 I just didn't see how it would be useful to gratuitously  
6 send that report into the Nuclear Regulatory Commission  
7 which would then make it a public document and it would  
8 be misquoted and it would be misunderstood by people  
9 without appropriate knowledge and training to be able to  
10 review and understand what that report really meant.

11 And that's that's the context of this answer.  
12 And it was not in the context of keeping it from the  
13 Board because the Board certainly is in the position to  
14 know the context.

15 Q During the period when you were considering the  
16 potential replacement of Brown & Root during -- well,  
17 July, August and the early September of 1981, did you  
18 consider whether it might be desirable to seek a  
19 postponement of the hearings before this Board that  
20 occurred during that particular period of time and  
21 particularly the testimony that you were not a witness,  
22 but where your other witnesses presented, concerning the  
23 new Brown & Root programs in concrete, for instance, the  
24 concrete restart program, several corrective programs in  
25 welding, I believe it was, testimony which looked to the

1 future as well as to the past.

2 A No, I don't think that was inappropriate. The  
3 whole process of trying to decide whether it was possible  
4 to make a change involved a host of activities starting  
5 with first finding out if there was anybody out there  
6 that was even interested or able to do the job, and we  
7 got the authority to go forward with that search back on  
8 June the 29th, 1981.

9 When we came back with our preliminary  
10 intelligence, which was within roughly, I think, seven to  
11 ten days after that, we were encouraged that there were  
12 people that appeared interested, but it was still not  
13 clear how this could be done. And we went through, of  
14 course, a process of enlisting proposals from  
15 candidates to understand not just what kind of resources  
16 they were going to commit, which was vital, but more  
17 importantly, how were they going to go about the task of  
18 taking over the design responsibilities from the previous  
19 contractor.

20 We didn't even know if this could be done. And  
21 it didn't make any sense to us during a time when we were  
22 exploring the a very unusual and tenuous situation to do  
23 anything to disrupt continued improvement of the project.

24 There was no reason to discourage the  
25 continuation of the project with the contractor we had,

1 until we were convinced that there may be a possible  
2 better way that we might go forward with the job. And  
3 that wasn't known certainly in that time frame.

4 Q I'm talking July, August, essentially.  
5 Possibly even early September, but mostly July and August  
6 when those hearings took place.

7 A No, sir. I'd say that obviously things look  
8 better as time progressed; we didn't get into any kind of  
9 a situation where we were going backwards. But at the same  
10 time, there was no way of knowing this thing would come  
11 to a successful conclusion if we talked success in terms  
12 of finding an alternative.

13 I mean, the fact was that until we were able to  
14 get a key responsibility nailed down with the oncoming  
15 contractor, which was that he had to accept the full  
16 design responsibility for the entire project including  
17 the work done by the previous contractor, we don't  
18 bifurcate the design responsibility for a nuclear plant  
19 in my opinion, and this was an important technical issue.  
20 And until we had a contract in hand where a contractor  
21 was willing to accept that responsibility, there was no  
22 guarantee we were ever going to be able to make a change.

23  
24  
25

1 Q Did you ever consider giving the Board and the  
2 parties information concerning this search process in  
3 camera treating it as proprietary data so that we  
4 couldn't distribute it or publicize it?

5 A I don't think, Mr. Chairman, that even came up  
6 in the conversation. I don't recall any dialogue on  
7 that.

8 Q Now, the final questions I have. When you  
9 made the three at first reports, the three reports --

10 MR. SINKIN: Mr. Chairman, I'm sorry, I can't  
11 hear you.

12 Q (By Judge Bechnoefer) When you made the  
13 reports of 50.55(e) items to the NRC, just for the  
14 moment take only the ones of May 8th which were  
15 confirmed roughly thirty days later in writing, why in  
16 making the confirmations in writing would you not have  
17 referred to the source or one source of the information  
18 reported as the Quadrex report? My recollection is that  
19 50.55(e) reports on many occasions relate exactly how  
20 the information giving rise to the report arises, arose.

21 A I can't tell you why it is or it isn't done  
22 simply because if you review the host of 50.55(e)  
23 reports that I know our company routinely files, there  
24 is -- the more common situation is that we don't get  
25 into a lot of dialogue on source of information. If we

1 uncover a problem, it may well be that we were assisted  
2 by a consultant in finding the problem, but I don't  
3 think that you'll find that we routinely say this  
4 problem was found by company X who was under contract to  
5 HL&P to perform a review. The substance of the  
6 information is clearly articulated. The precise  
7 contractual source of who found it is rarely, in my  
8 memory serves me, ever discussed in these reports.

9 Q Well, there are some reports that say like one  
10 of our workers happened to look at something and it was  
11 incorrect or he did a test --

12 A Oh, I wasn't suggesting that it is an all or  
13 nothing situation. I wasn't trying to say that at all.

14 Q I'm not trying to say it's done on every  
15 occasion either.

16 A I don't think that there is really any  
17 pattern, there's certainly no instructions that would  
18 tell a man you should or you shouldn't identify the  
19 source. I think it's almost a writing style as to how  
20 these things end up being written.

21 Q Thank you.

22 JUDGE BECHHOEFER: That's all the questions  
23 the Board has.

24 Mr. Axelrad, redirect?

25 MR. AXELRAD: May I have a minute, Mr.



1 Chairman?

2 JUDGE BECHHOEFER: Sure. Would you like a  
3 short --

4 MR. AXELRAD: Yes, can we have a short recess,  
5 please?

6 JUDGE BECHHOEFER: Why don't we take a  
7 fifteen-minute break.

8 (Recess.)

9 JUDGE BECHHOEFER: On the record.

10 MR. AXELRAD: Mr. Chairman, we have a few  
11 questions on redirect.

12 First, to deal with a subject which came up in  
13 this morning's questions by Chairman Bechhoefer, I would  
14 like to hand to Mr. Goldberg a copy of the document  
15 which Chairman Bechhoefer referred to this morning,  
16 namely the document that had been produced as number 44,  
17 Mr. Thrash's notes of the meeting of the management  
18 committee on June 26, 1981.

19 Q (BY MR. AXELRAD) Mr. Goldberg, Chairman  
20 Bechhoefer asked you some questions with respect to the  
21 reference in that document as to whether the Quadrex  
22 report copies would go to the intervenors. Do you  
23 notice a couple of lines above that are references to  
24 the PUC and the NRC?

25 A Yes, I see that.

1 Q Do you recall any discussions at a management  
2 committee meeting as to whether the Quadrex report would  
3 be sent to the NRC or the PUC?

4 A I can't recall with any precision whether it  
5 was this particular meeting. I wasn't even sure of the  
6 date of this meeting. But I believe that there were  
7 some questions posed by the management committee  
8 regarding whether or not this report would be going to  
9 either the PUC or the NRC. And, as I recall, the  
10 response was no, there was no plan to do that. There  
11 was no regulatory requirement that we were aware of in  
12 either the PUC or the NRC that would normally require  
13 this report to be filed.

14 Q In conjunction with such a discussion, could  
15 there have been any additional discussion with respect  
16 to whether any other public disclosure of the Quadrex  
17 report would take place?

18 A I think in the context of that kind of a  
19 dialogue, that's I'm sure the case. I think there was  
20 an interest in understanding whether this report would  
21 be a matter of public information. Our management  
22 committee would clearly be given a lot of questions from  
23 various people should the matter be a matter of public  
24 dissemination. And I think the question was being asked  
25 so as to enable the members to understand whether or not



1 they would have to become extremely knowledgeable about  
2 the details of the report in the event that questions  
3 might be directed to their particular office.

4 So, as best I can tell, that would not be an  
5 unusual dialogue for members of the management committee  
6 to undertake.

7 Q Thank you, Mr. Goldberg.

8 Mr. Goldberg, yesterday Mr. Sinkin asked you  
9 to identify certain pages from your testimony before the  
10 PUC which was received as CCANP Exhibit No. 90 in this  
11 proceeding. I would like to hand you a copy of those  
12 pages.

13 As a result of examining those pages, would  
14 you wish to modify any part of your testimony in this  
15 proceeding?

16 A No.

17 Q Mr. Goldberg, who made the decision on behalf  
18 of HL&P to select Bechtel from among the competing  
19 vendors?

20 A Well, as Mr. Jordan discussed yesterday, he  
21 made the decision to go forward with the replacement and  
22 he made the decision to select Bechtel as contractor to  
23 take over the engineering and construction management  
24 responsibilities.

25 My reference to a group of four in my PUC

1 testimony consisted of the following: Mr. Oprea, myself  
2 and Mr. Newman were an evaluation team where Mr. Oprea  
3 and myself were responsible for management and technical  
4 competence and Mr. Newman supplied a review of the  
5 licensing and contracts administration aspects of this  
6 undertaking. We reviewed the contractors and had  
7 numerous discussions in effect identifying their  
8 relative strengths and weaknesses in the areas that we  
9 were reviewing. That took place prior to the morning of  
10 September 12th.

11 On September 12th, we met with Mr. Jordan and  
12 I characterized in my PUC testimony that that group of  
13 three became a group of four and I even think I  
14 characterized it as decision makers. Well, what the  
15 real thrust of what we were doing is this was a group of  
16 four who were conferring on the substance of these  
17 matters, but the decision was really a decision of one,  
18 Mr. Jordan.

19 I would like to think I had some influence in  
20 the decision, but he made the final decision. I don't  
21 think that there's any inconsistency in my testimony  
22 before this Board and my testimony before the Public  
23 Utility Commission.

24 Q Did Mr. Newman provide any input to the  
25 decision as you have explained?

1 MR. SINKIN: I'm sorry. I can't hear you, Mr.  
2 Axelrad.

3 Q (BY MR. AXELRAD) Did Mr. Newman provide any  
4 input at the meeting?

5 A Mr. Newman supplied a number of things. He  
6 assisted Mr. Oprea and myself in evaluating the  
7 candidates that were being recommended for key jobs with  
8 various contractors in terms of their knowledge of the  
9 rather complex licensing implications associated with  
10 the takeover. He also assisted me in the preparation of  
11 the request for proposal in the area of the contractual  
12 implications.

13 Mr. Newman at my request was asked to put  
14 together a contractor summary type document, a  
15 contractor selection summary type document where I gave  
16 him some rough notes of things that I felt it should  
17 include and he undertook to do a draft of this document  
18 which he supplied to Mr. Oprea and myself for our review  
19 and comment. He did not have any direct influence in  
20 the selection beyond supplying advice on matters of  
21 contract and on licensing. And I guess it's fair to say  
22 I didn't either because I didn't make the decision. I  
23 would have liked to have been able to make it, but that  
24 was Mr. Jordan's prerogative. And I supplied Mr. Jordan  
25 the benefit of my advice and counsel in the various

1 areas that I evaluated.

2 Q Mr. Goldberg, do you recall yesterday when you  
3 were asked several questions by Chairman Bechhoefer  
4 relating to why you did not mention your May 6, 1981  
5 letter to Mr. Saltarelli in answer 13 of your 1981  
6 prefiled testimony in Phase I of this proceeding?

7 A Yes, I do.

8 MR. AXELRAD: I am handing the witness a copy  
9 of his prefiled testimony in 1981.

10 Q (BY MR. AXELRAD) Will you please explain  
11 further why you did not mention that letter of May 6th,  
12 1981 to Mr. Saltarelli in answer 13 of your 1981  
13 prefiled testimony?

14 A The questions 10 through 12 dealt with how we  
15 were organized in our project engineering group, how it  
16 was organized and what its activities were. And then  
17 the question 13 was to give examples of how the project  
18 engineering group carried out those activities.

19 My letter to Mr. Saltarelli on May the 6th was  
20 clearly outside the realm of the project engineering  
21 group activities. In fact, the whole Quadrex review was  
22 outside the scope of the project engineering group  
23 activities. And my letter to Mr. Saltarelli was a  
24 management document from one manager to another  
25 identifying some activities that we required Brown &

1 Root to undertake.

2 So, clearly this would not have been an  
3 example of the activities of the project engineering  
4 group.

5 Q And can you explain why you did not otherwise  
6 provide the May 6th, 1981 letter to the Board?

7 A The whole subject of the Quadrex review, as I  
8 said previously to the Board, in my view was not in  
9 concert with what I understood the activities or  
10 interests of the Board to be regarding South Texas. As  
11 I explained, the focal point in my mind about the  
12 Board's area of interest was on the construction  
13 activities, the construction quality, the quality  
14 control/construction relationships at the job site. I  
15 did not connect the Quadrex report as being of  
16 particular interest to any issue pending before the  
17 Board.

18 MR. AXELRAD: That is all we have, Mr.  
19 Chairman.

20 JUDGE BECHHOEFER: Mr. Sinkin?

21 MR. SINKIN: If I could have about five  
22 minutes just to review this last part, I think it would  
23 be more efficient.

24 JUDGE BECHHOEFER: Five minutes.

25 (Recess.)



1 JUDGE BECHHOEFER: Back on the record.

2  
3 RECROSS EXAMINATION

4 BY MR. SINKIN:

5 Q Mr. Goldberg, in response to a question from  
6 Mr. Pirfo, you stated that when you went to meet with  
7 Mr. Sells you recalled that you had the whole report and  
8 briefing notes on a clipboard. Do you remember that  
9 answer?

10 A Yes.

11 Q Do you still have those briefing notes?

12 A I don't believe so.

13 Q Have you at any time recently looked for those  
14 briefing notes?

15 A In preparation for this phase of the hearings,  
16 the attorneys gathered up every piece of paper that had  
17 any bearing on Quadrex and I can tell you that there's  
18 any number of things that I didn't even know existed  
19 that turned up. It was hard to keep track of where  
20 every piece of paper goes dealing with day to day  
21 business.

22 Q Judge Lamb asked you what would be necessary  
23 for the entire report --

24 MR. SINKIN: Can we go off the record for just  
25 a moment, Mr. Chairman?

1 (Discussion off the record.)

2 Q (By Mr. Sinkin) Judge Lamb asked what would  
3 be necessary for the entire report to be given to the  
4 NRC as documenting a quality assurance breakdown. And  
5 in your response you said that if there were a number of  
6 broad concerns in the report and then you gave three  
7 examples, absence of an adequate design control program,  
8 extensive errors in calculations or the machinery was  
9 not in place to insure systems integration. If any of  
10 those three elements were proven by the facts, then the  
11 report would have portrayed a design system extensively  
12 flawed potentially without limit. Do you remember that  
13 response to Judge Lamb?

14 A Yes.

15 Q Didn't the Quadrex -- or let me ask you, did  
16 the Quadrex report in your view taken as a whole point  
17 to an absence of an adequate design control program?

18 A No, I don't believe it did. I think it  
19 certainly alleged that it perceived that that might be  
20 the case.

21 Q So, you disagreed with the Quadrex report of  
22 the allegation as you have termed it?

23 A When we reviewed the substance of the matters  
24 being addressed by the report, in many areas we could  
25 not find sufficient substance to support the manner in



1 which the conclusions were being drawn.

2 I think there's a big difference between a  
3 concern being voiced based on limited information  
4 reviewed as opposed to a final perception based on more  
5 thorough examination, more review of the facts. And I  
6 think I characterized that one of the inherent  
7 weaknesses of the Quadrex review stemmed from the fact  
8 that we had set a fairly tight time constraint. I was  
9 interested in trying to understand where we were and I  
10 had hoped that I would have that information by March or  
11 maybe early April at the latest. And as it turned out,  
12 the report dragged all the way into May.

13 We didn't afford Quadrex sufficient  
14 opportunity to revisit with the key areas where many of  
15 their concerns had been identified. And that didn't  
16 constitute the kind of review necessary to really be  
17 sure that some of those observations were on the mark.

18 Q You're characterizing, I believe, the review  
19 on May the 7th and May 8th as more thorough than the  
20 Quadrex review, are you not?

21 A What I'm suggesting is that the particular  
22 areas at issue which were in the report were visited by  
23 the key members of the entire Brown & Root engineering  
24 team. And as I said further, there was also at least a  
25 participative but more in the way of a monitoring role

1 of two HL&P engineers, Dr. Sumpter and Mr. Robertson.

2 But once the specific issues had been  
3 identified with the supporting evidence as to what those  
4 conclusions were based upon, which was, in fact, the  
5 Quadrex report itself, then Brown & Root had something  
6 that they could attempt to evaluate and make some  
7 judgments. And that's what took place during the  
8 afternoon of May the 7th and all through the evening of  
9 May the 7th and into the morning of May the 8th.

10 Q Let me understand what in your view are the  
11 elements of an adequate design control program. What do  
12 you expect to see if you have an adequate design control  
13 program?

14 A I think that question was asked at least once  
15 and it was answered in explicit detail. I think we  
16 talked about the process of the key elements for the  
17 doer and for the verifier.

18 Q I don't remember the dialogue being exactly on  
19 the definition of an adequate design control program,  
20 Mr. Goldberg. If you could just highlight what you see  
21 as the key elements. We don't need to go into any depth  
22 or detail.

23 MR. AXELRAD: Mr. Chairman, these kinds of  
24 matters have been discussed at some length in the past  
25 few days of this hearing and I don't believe that the

1 type of questions that Judge Lamb raised warrant  
2 follow-up in the detailed matter that Mr. Sinkin is now  
3 proposing.

4 MR. SINKIN: Let me try a separate question,  
5 Mr. Chairman, and shorten it up, make it simpler.

6 Q (By Mr. Sinkin) I would ask you, Mr.  
7 Goldberg, to turn to Applicants' Exhibit 60, that's the  
8 Quadrex report, page 3-2. Just the first paragraph is  
9 what I'm looking at for the moment, Mr. Goldberg.

10 A I've read the first paragraph.

11 Q All right. If an architect engineer had an  
12 adequate design control program, would you expect to  
13 find that plant arrangements and equipment layout take  
14 into account such factors as physical separation, system  
15 and equipment performance compatibility, access for  
16 maintenance and ISI and other similar aspects of the  
17 design?

18 A That's not the parlance of design control.  
19 We're talking here in terms of possible experience and  
20 skill for people who are working on the job sensitive to  
21 the need for providing for access for maintenance and  
22 ISI. If you're looking at this statement as some form  
23 of support on the question of design control, I don't  
24 see that as the point at issue here.

25 Q Quadrex says that in the absence of plant

1 arrangements and equipment layout that do take into  
2 account such factors, things can be too easily  
3 overlooked or missed. If things are being overlooked or  
4 missed, do you have an adequate design control process?

5 MR. AXELRAD: Mr. Chairman, I'm not sure I  
6 understand where this line of questioning is going. Mr.  
7 Sinkin is now beginning to discuss -- the previous  
8 question was a hypothetical. He apparently is now going  
9 into another hypothetical. I don't believe that any  
10 aspect of this was called for through Judge Lamb's  
11 question.

12 Mr. Sinkin had at least three days, I think,  
13 of cross-examination of Mr. Goldberg in which he could  
14 have gone thoroughly into every aspect of Mr. Goldberg's  
15 testimony. And it appears to me that what Mr. Sinkin is  
16 now doing is under the guise of a follow-up on Judge  
17 Lamb's question, going into another round of  
18 cross-examination. That is not the purpose of allowing  
19 other parties to ask questions after the Board asks its  
20 questions. And I think what we have here is a perfect  
21 version of the discretionary ability that the Board has  
22 granted to other parties to ask questions based upon the  
23 Board's questioning.

24 MR. SINKIN: Well, Mr. Chairman, first of all,  
25 it's obviously not a hypothetical in the sense that

1 Quadrex concluded that under the current plant  
2 arrangements and equipment layout, under the -- excuse  
3 me, under the present design review process, the plant  
4 arrangements and equipment layout do not take into  
5 account the factors listed here to an adequate degree  
6 such that those factors can be easily overlooked or  
7 missed.

8 I'm asking Mr. Goldberg if that characterizes  
9 a design process that is an adequate design control  
10 program in the sense he used those words in responding  
11 to Judge Lamb's questions as to what would lead to the  
12 entire report being turned over.

13 (No hiatus.)  
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1 MR. AXELRAD: That's even a mischaracterization  
2 of this paragraph. This paragraph doesn't say that they --  
3 that plant and arrangement equipment layouts do not take  
4 into those factors.

5 MR. SINKIN: It says "sufficiently," I think I  
6 add.

7 JUDGE SHON: Doesn't even say that, Mr. Sinkin.

8 JUDGE BECHHOEFER: I think we will, at least on  
9 that basis, we will sustain that objection, because the  
10 paragraph doesn't state what it's alleged to have stated,  
11 asserted to have stated, I should say.

12 MR. SINKIN: Excuse me, the paragraph in  
13 question states that under the present design review  
14 process, you don't find or you can too easily overlook or  
15 miss entirely assuring yourself that plant arrangements  
16 and equipment layout take into account the factors listed  
17 in that paragraph. Can we agree that that's what the  
18 paragraph says?

19 JUDGE BECHHOEFER: It does say that.

20 MR. SINKIN: Okay. Under the present design  
21 review process, you can -- well, we'll leave it as how I  
22 characterized it.

23 Q (By Mr. Sinkin) Let me ask Mr. Goldberg, maybe  
24 to be sure we're clear on the question, how you  
25 understand that paragraph, what is it Quadrex is trying

1 to say?

2 MR. AXELRAD: Mr. Chairman, I have the basic  
3 objection that I made before, that this is improper  
4 redirect based upon -- recross based upon Judge Lamb's  
5 question that Mr. Sinkin is taking add advantage of the  
6 discretionary ability that the Board has granted of  
7 asking follow-up questions to in essence begin another  
8 round of cross examination. He could have easily asked  
9 any question he wanted to ask with respect to this  
10 paragraph in the three or four days of cross-examination  
11 that were granted. And I believe it's incumbant upon the  
12 Board to make him sharpen any questions that he wants to  
13 ask at this time to be truly a follow-up to Judge Lamb's  
14 question.

15 Judge Lamb recalls the questions and answers he  
16 got and I don't believe Judge Lamb would agree that the  
17 cross-examination based upon this single paragraph under  
18 the heading of Brown & Root's systems levels integration  
19 is a proper cross-examination on the quesitons that he  
20 had asked.

21 JUDGE BECHHOEFER: I think that we'll sustain  
22 that objection. It does go beyond the scope of Dr.  
23 Lamb's question.

24 MR. SINKIN: Maybe I'll approach it this way.

25 Q (By Mr. Sinkin) The three elements that you

1 responded to Judge Lamb with as to whether the report  
2 might be turned over with absence of an adequate design  
3 control program, extensive errors in calculations and the  
4 machinery not in place to ensure systems integration.  
5 Was it your opinion on May the 8th that Brown & Root had  
6 an adequate design control program?

7 A Yes, it was.

8 Q Was it your opinion on May the 8th that Brown &  
9 Root was not making extensive errors in calculations?

10 A Yes, it was.

11 Q Was it your opinion --

12 A Let me finish that answer.

13 Q I'm sorry.

14 A On the strength of the information provided in  
15 the Quadrex report, we had no reason to believe that we  
16 had extensive errors in calculations. There were very  
17 few calculations examined, and I think there were four  
18 instances which Quadrex cited constituted a possible  
19 error, and when you review the character of those, I  
20 think that only one and possibly two were errors.

21 One of them was a very conservative assumption  
22 which I wouldn't call in itself an error, and the other  
23 one I can't recall the character, but it was definitely  
24 not an error. And that hardly makes a case for indicting  
25 the entire design verification process.

1 Q Based on all of your experiences to date -- all  
2 of your experiences from October 1980 to May 8, 1980, you  
3 brought that to the meeting, too, not just the Quadrex  
4 report?

5 MR. AXELRAD: Was that '81?

6 MR. SINKIN: '81, excuse me.

7 Q (By Mr. Sinkin) From the time you came in  
8 October 1980 to May 8, 1981, you had a great deal of  
9 experience with the project and with Brown & Root's  
10 project engineering. Correct?

11 A I had the benefit of approximately I guess it  
12 was almost six months, right.

13 Q And you brought that to the meeting on May 8,  
14 as well as receiving the Quadrex report?

15 A I had -- that's correct, I had certain  
16 knowledge.

17 Q The opinion you had about Brown & Root's errors  
18 in calculations, were you basing that solely on what was  
19 in the Quadrex report or were you also reviewing in your  
20 mind other information you had about previous errors in  
21 calculations that Quadrex may not have found?

22 A I was basing that on the input from the  
23 engineers who were conversing with the review that took  
24 place the night before with the information available  
25 regarding the character of the particular errors that

1 Quadrex claims to have found. And on the strength of  
2 that information, we did not have a basis to believe that  
3 we had a significant number of errors.

4 I don't know whether they visited any previous  
5 reviews of Brown & Root calculations during the review  
6 that ensued the night before. I didn't, certainly in my  
7 meeting with Mr. Robertson and Dr. Sumpter, on the  
8 afternoon of May the 8th.

9 Q We're very close to my question, but I don't  
10 think it was quite answered. I'm talking about what you  
11 knew from your own experiences from October 1980 to May  
12 8, 1981 about errors Brown & Root had made in design  
13 calculations, whether there was anything from that group  
14 of experiences that you brought to this meeting?

15 A I was not aware of any pattern of Brown & Root  
16 errors in design calculations when I went to the meeting.

17 Q Was it your opinion on May the 8th, 1981 that  
18 the machinery was in place to ensure systems integration?

19 A Yes.

20 Q By "in place," do you mean actually integrated  
21 into the system and operating at its full effectiveness?

22 A Mr. Saltarelli -- excuse me, Mr. Sinkin, I  
23 don't believe that anything that's in place is  
24 necessarily at its full effectiveness. We're always  
25 looking for ways of improving the quality of operations.



1 Mr. Saltarelli started the systems integration group. He  
2 put that in place earlier in 1980. And it's before my  
3 arrival on the project. I would suspect that it had been  
4 in operation for probably not more than a years time, at  
5 the time of the Quadrex review.

6 I'm persuaded that it probably would have  
7 performed even better had it been in place two years.  
8 And I suspect if it were in place three years, perhaps  
9 even better than that.

10 Q Given that, was the system that had been in  
11 place for one year adequate to ensure systems  
12 integration?

13 A I believe that is the case, yes.

14 Q One of the reasons you selected Dr. Sumpter for  
15 the May 8 review was his extensive knowledge of the  
16 project. Is that correct?

17 A That is one of the reasons.

18 Q He had been there from the beginning of Brown &  
19 Root's design engineering, had he not?

20 A That is another reason.

21 Q Did you ask Dr. Sumpter on May 8th whether in  
22 his view, Brown & Root had an adequate design control  
23 program?

24 A I can't help but think that certainly related  
25 elements of your question had to have come up. Each

1 matter that was in that report was being considered. We  
2 were looking at discipline findings but we were mindful  
3 of the generic findings.

4 If Dr. Sumpter had indicated to me that he was  
5 concerned about any elements of Brown & Root's activities  
6 which constituted a matter of a character that might  
7 suggest broad breakdown in the quality of the Brown &  
8 Root engineering role, that matter certainly would have  
9 surfaced.

10 I didn't disagree with any concern brought to  
11 my attention. It took a lot of intelligence by Mr.  
12 Robertson and Dr. Sumpter to help me put in better  
13 perspective what that Quadrex report really said.

14 Q Did you discuss at all with Dr. Sumpter prior  
15 calculation errors by Brown & Root other than those  
16 Quadrex addressed?

17 A I can't recall whether that came up in the  
18 conversation or not. Clearly we were looking at these  
19 various findings. But I don't recall specifically  
20 bringing that up. It might have come up.

21 Q Did you discuss with Dr. Sumpter the prior  
22 history of Brown & Root in successfully achieving systems  
23 integration at the South Texas Nuclear Project?

24 A I think it's fair to say that before Mr.  
25 Saltarelli's arrival on the scene in April of 1980, that

1 there wasn't the quality of technical leadership  
2 available that the project was fortunate to have. And  
3 while it still had plenty of room for improvement, Mr.  
4 Saltarelli knows a considerable amount of information  
5 regarding how to carry out the design of a a nuclear  
6 power plant. And he was in fact instructing that  
7 operation to carry out that role in an effective manner  
8 and I had in place the systems integration group.

9 Q My question was whether you discussed with Dr.  
10 Sumpter the previous history of Brown & Root's ability to  
11 achieve effective systems integration.

12 A I'm sure Dr. Sumpter pointed out on occasion  
13 some of the difficulties in the early days, both prior to  
14 and possibly during the review of the Quadrex report.

15 Q There's been some controversy about the systems  
16 integration group and whether Quadrex talked to them or  
17 not during the survey. I believe Brown & Root repeatedly  
18 said, "We had this group and Quadrex didn't even talk to  
19 them." Do you remember that particular controversy?

20 MR. AXELRAD: Mr. Chairman, I don't know where  
21 this controversy appears. If Mr. Sinkin has a specific  
22 portion of the Quadrex report or some other reference.

23 MR. SINKIN: It's not in the Quadrex report;  
24 it's Brown & Root response to the Quadrex report. Said  
25 that they had a systems -- it's in your testimony, Mr.

1 Goldberg. I thought we could just do it very easily.

2 Q (By Mr. Sinkin) All right. Let's talk about  
3 the systems design assurance group developed by Brown &  
4 Root. That's what you are referring to that Mr.  
5 Saltarelli put in place?

6 A Yes.

7 Q After the Quadrex report was delivered, was it  
8 Brown & Root's position that Quadrex had not talked  
9 directly to the systems design assurance group and  
10 therefore didn't understand that Brown & Root had more of  
11 a systems integration process than Quadrex perceived?

12 MR. AXELRAD: Mr. Chairman, we've been patient,  
13 but I'm not sure that I can relate the extensive line of  
14 questioning that Mr. Sinkin is now going through as being  
15 related to Judge Lamb's questioning of Mr. Goldberg. As  
16 I mentioned before, opportunity to question based upon a  
17 Board member's question is not an opportunity to go back  
18 and revisit the Quadrex report, its entire history and  
19 what Brown & Root's reaction may or may not have been to  
20 a Quadrex finding.

21 Mr. Sinkin had ample opportunity three days or  
22 more, to cross-examine Mr. Goldberg on these very  
23 questions that he's now attempting to bring up. There is  
24 nothing in Judge Lamb's question which would have  
25 initially raised these kinds of question that Mr. Sinkin

1 couldn't have well conceived of while he was cross  
2 examining Mr. Goldberg.

3 And I believe some restraint has to be placed  
4 on the length of this re-examination.

5 MR. SINKIN: The problem of Mr. Axelrad's  
6 argument is that it proves far too much, supposes I  
7 asked about what I could have thought of while I was  
8 cross-examining. And I believe the whole idea of  
9 allowing questions after the Board is the Board  
10 approaches the problem from a different point of view  
11 than I approached in in my cross-examination. An area  
12 that I explored comes up in a different light, I then  
13 follow up on the Board's perspective of that area and  
14 develop the record further.

15 Obviously if I can't ask --

16 JUDGE BECHHOEFER: I think the Board will  
17 sustain that objection. I do think it's going far beyond  
18 what the Board had in mind when the particular question  
19 was being asked.

20 Q (By Mr. Sinkin) In response to the question  
21 from Judge Lamb, I think it's in response to that very  
22 same question -- you stated the review is was done by  
23 engineers who had nothing to gain by minimizing the  
24 report. Do you remember that?

25 A That's right.



1 Q But if you did minimize the report, would it  
2 not be less likely that you would have to turn the report  
3 over to the Nuclear Regulatory Commission?

4 A You're asking a hypothetical question.

5 Q Right.

6 A Clearly, if there was nothing in the report, I  
7 guess we wouldn't be here talking about it.

8 Q But if you -- well, that's a good answer right  
9 there.

10 You stated that as part of the answer you went  
11 through in deciding whether to turn over the report to  
12 NRC, you made inquiries regarding whether supplying  
13 consultant reports to NRC was the practice of HL&P. My  
14 question is: Who did you ask?

15 A Dr. Sumpter.

16 Q In discussing finding 4.6.2.1 (n), with  
17 Chairman Bechhoefer, you stated that a re-analysis was in  
18 progress. Do you remember that?

19 A That is correct.

20 Q Would the fact that a given problem is  
21 undergoing re-analysis be a reason in your mind why there  
22 would not be a potentially reportable deficiency?

23 A That was only part of the answer. The answer I  
24 think I addressed to the given question addressed  
25 two things: One, Quadrex believed that Brown & Root

1 had not analyzed for one of the conditions set forth in  
2 the regulation, or the reg guide, I should say dealing  
3 with ultimate heat sinks.

4 Brown & Root had done both of those analyses.  
5 I don't believe that Quadrex was able to see the analysis  
6 for the case of both plants shutting down simultaneously.  
7 But that analysis had been performed, it had been  
8 reported in the final safety analysis report. Brown &  
9 Root was in the process of redoing the analysis. We  
10 didn't have in my mind sufficient -- not just my mind,  
11 but in the minds of the people who made the review for  
12 reportability, we did not see sufficient concern at that  
13 point for this particular matter, because the thrust of  
14 Quadrex's concern stemmed from the belief that the  
15 analysis had never been done.

16 Q Well, then let me turn that into a  
17 hypothetical. In your view, if you have an identified  
18 problem in the design process that is undergoing  
19 re-analysis at the time you see the problem, is that, in  
20 your mind, a reason that makes that particular deficiency  
21 not a potentially reportable deficiency given that it  
22 would meet all the other requirements?

23 A Well, I don't want to pick apart your question,  
24 Mr. Sinkin, but I really have to. You started by a  
25 connotation that I have a problem. I don't have a

1 problem, I have a question. I attempted yesterday to try  
2 to at least alert people that in trying to apply the test  
3 forr reportability, you don't apply it before you  
4 understand the character of the question.

5 Q Maybe something about my question was  
6 inappropriate. Let me try again.

7 A You said I had a problem. I don't believe that  
8 we had a problem; we had a question.

9 Q I'm creating a hypothetical, Mr. Goldberg.  
10 Maybe that's what you didn't hear. I'm creating a  
11 hypothetical. We're not directly address 4.6.2.1(n)  
12 we're completing a hypothetical that's a similar  
13 situation and changing one fact.

14 You discover there is a problem that meets all  
15 the other criteria of 50.55(e) but there is currently a  
16 re-analysis underway of that problem. Do you therefore  
17 not have a potentially reportable deficiency, in your  
18 view?

19 A Given that hypothetical --

20 MR. AXELRAD: Mr. Chairman, I believe that type  
21 of hypothetical which Mr. Sinkin is now raising have been  
22 discussed at length in previous hypotheticals that were  
23 discussed by the witness. He explained what type of  
24 information he would have to have before he would  
25 determine that he knew sufficiently that a problem

1     existed, that he would have to file something as  
2     potentially reportable. And Mr. Sinkin is now trying to  
3     go over the same ground that we've been going over at  
4     length in the past three or four days.

5             MR. SINKIN: Mr. Chairman, I don't believe the  
6     last three or four days would reflect that this  
7     particular situation came up. Yes, we've talked about,  
8     you see something you need to get enough information to  
9     know whether you have something and therefore you're  
10    doing some analysis.

11            The situation I'm creating is: You've done the  
12    analysis, you see you have a problem, but you know  
13    there's re-analysis already going on within the design  
14    and engineering group.

15            I don't believe that specific question has ever  
16    been raised.

17            MR. PIRFO: That specific question, Mr.  
18    Chairman, is not relevant to 50.55(e), then. It shows  
19    that your -- well --

20            MR. SINKIN: Excuse me, I don't believe Mr.  
21    Pirfo is the witness.

22            MR. PIRFO: I'm responding to the objection. I  
23    thought I had a right to do that and I did not attempt to  
24    testify.

25            My objection was that it was irrelevant and the

1 fact that I'm not the witness, I don't see how that's  
2 material to what I've said.

3 JUDGE BECHHOEFER: I think we'll overrule this  
4 objection, inasmuch as I did ask Mr. Goldberg about where  
5 the threshold would be. We will not allow an unlimited  
6 number of questions testing that threshold, however.

7 Q (By Mr. Sinkin) Do you remember the question,  
8 Mr. Goldberg?

9 A Yes, I do.

10 MR. AXELRAD: I'm sorry, I don't remember the  
11 question. And I'd like to make sure I know what the  
12 question is when I hear the answer. So if you or either  
13 the reporter or Mr. Sinkin can repeat the question.

14 MR. SINKIN: I'll let the reporter do it.  
15 (The last-above question was read back  
16 by the reporter.)

17 A I'll be glad to answer the hypothetical. It's  
18 totally unrelated to 4.6.2.1(n).

19 Q (By Mr. Sinkin) If you would answer, please.

20 A The fact that a re-analysis would be taking  
21 place would not change the the test for reportability.

22 Q Thank you, Mr. Goldberg. In response to a  
23 series of questions the Chairman was asking you about the  
24 application of the 14 day rule, in 50.55(e), the guidance  
25 about 14 days, you remember that?



1 A It's guidance.

2 Q The guidance from the NRC?

3 A It's not a rule.

4 Q Not a rule, you are correct. You mentioned two  
5 areas or the Chairman brought up two areas; my notes  
6 don't accurately reflect. I think it must have been the  
7 Chairman brought up two areas, the heating ventilation  
8 and air conditioning and the computer code verification.

9 And you explained that on heating ventilating  
10 and air conditioning it was a matter of 14 days, and that  
11 had been a problem for a year?

12 You never actually answered the second part of  
13 the question, computer code verification and how the 14  
14 day rule might or might not have applied in the computer  
15 code verification. And I'd like you to do that.

16 A Well, it may be incorrect, but I seem to recall  
17 that I think the Chairman was asking the question and I  
18 chose to use the heating, ventilating and air  
19 conditioning as an example. I don't think it was a case  
20 that I wasn't responsive to his question.

21 Q That may well be, Mr. Goldberg, either you or  
22 the Chairman brought up both heating and ventilating and  
23 air conditioning and computer code verification in that  
24 context and you explained HVAC but you did not explain  
25 computer code verification.

1           A     And your question is what would you like to  
2 know about --

3           Q     Applying that 14 day rule -- well, let's back  
4 up. On the computer code verification, that's a  
5 notification that the NRC found was late, in their view?

6           A     NRC found that it was late in their view, that  
7 is correct.

8           Q     The context in which you were discussing that  
9 with the Chairman was the 14-day rule and how that might  
10 influence whether it was late or not late. That's the  
11 context I wanted you to apply to that finding of the NRC.

12           MR. AXELRAD: Well, Mr. Chairman, I'm not sure  
13 I understand how to apply something in the context of  
14 something. If Mr. Sinkin could just ask a direct  
15 question with respect to the computer code verification  
16 problem.

17           JUDGE BECHHOEFER: Could you rephrase your  
18 question?

19           MR. SINKIN: I'll try, Mr. Chairman. I will  
20 note for the record the witness was prepared to answer  
21 it.

22           MR. PIRFO: I'd move that be stricken. How  
23 does Mr. Sinkin know the witness had been prepared to  
24 answer.

25           MR. SINKIN: He had already started to answer.

1 MR. PIRFO: The record will speak for itself.  
2 You don't need Mr. Sinkin speculating the witnesses --

3 MR. SINKIN: I make that observation, Mr.  
4 Chairman, because it's becoming a pattern of some sort  
5 that I get the question finally defined, the witness is  
6 prepared to answer it and we get another objection.

7 MR. AXELRAD: I need to --

8 MR. SINKIN: I just want to -- I want to put on  
9 notice that while we're not calling for any action by the  
10 Board at this point, that if it becomes a repetitive  
11 pattern as we perceive it was in Phase I, we'll approach  
12 the Board for some kind of action.

13 MR. AXELRAD: I need to respond to that comment  
14 by Mr. Sinkin. I would remind Mr. Sinkin once more that  
15 this record is being created not just for the intervenor  
16 and for the witness, but the record is being created for  
17 a decision to be made by this Board and it has to be  
18 reviewed by other appellate bodies and it's essential  
19 that we have a record that's clear and understandable,  
20 and that even if the witness may think that he  
21 understands the question that the questioner has asked,  
22 it is important that the question be clear and  
23 unambiguous so that everyone else can understand the  
24 answer and that we have a record that has an appropriate  
25 basis for any decision that has to be made.

1 MR. PIRFO: I would simply add, Mr. Chairman to  
2 extent to the witness begins to respond to a question,  
3 the reporter will take that down. And there's no need  
4 for Mr. Sinkin to note that.

5 JUDGE BECHHOEFER: Well, in any event, I had  
6 thought that the question was somewhat ambiguous and was  
7 about -- that's why I suggested that it be restated.

8 MR. AXELRAD: Thank you, Mr. Chairman.

9 Q (By Mr. Sinkin) Given your knowledge of the  
10 computer code verification prior to -- let me try again.  
11 Given your knowledge of what HL&P knew about Brown &  
12 Root's computer code verification problems prior to May  
13 8, 1981, do you perceive in retrospect that the 14 day  
14 rule would in any way apply to what HL&P was doing  
15 regarding notifying the NRC about the computer codes?

16 MR. AXELRAD: I would only ask that that  
17 question be modified to refer to 14 day guidance as  
18 opposed to 14 day -- excuse me, I keep saying rule, you  
19 are right. Guidance.

20 A I think it's a matter of existing public  
21 record, as to our position regarding the reportable on  
22 the computer program verification. We did make that  
23 report on May the 8th, 1981, and inspection and  
24 enforcement branch indicated that they felt that we had  
25 had sufficient information earlier than the issuance of

1 the Quadrex report and therefore, that we were late in  
2 making that report.

3 And this comes back to this rather interesting  
4 area where at what point does a licensee have sufficient  
5 understanding of the character of the question that the  
6 start of the clock for the review takes place. 14 days  
7 is guidance for the review interval. And HL&P was of the  
8 mind that we hadn't received enough information to start  
9 the review as early as apparently the Nuclear Regulatory  
10 Commission inspection and enforcement branch perceived.

11 Therein lies a difference in judgment, of  
12 course, inspection and enforcement cited us for being  
13 late. That problem initially surfaced in an audit that  
14 Brown & Root conducted I believe in December of 1980.  
15 The question that the audit raised was so bizzare, if I  
16 can use that word advisedly, that we asked Brown & Root  
17 to proceed to provide some additional insight as to just  
18 how they were carrying out the verification process.

19 Quadrex got started in their review, we first  
20 were character in January of 1981, shortly after this  
21 audit, and somewhere in the formative period for the  
22 scope of the review, we specifically asked Quadrex to  
23 look into this matter for us because it was already a  
24 question that had surfaced and we were trying to  
25 understand the character of the problem.



1           And that's really how Quadrex got into that  
2 particular area; we specifically asked them to pay close  
3 attention and give us the benefit of their review of the  
4 subject as it might serve to parallel and supplement  
5 input that we might receive from Brown & Root.

6           And it was when I had this clear picture, we,  
7 HL&P, had this clear picture, that the manner of  
8 associating the verification activity with the version of  
9 the code that was being verified was sufficiently  
10 obscure, that that raised a broader concern as to whether  
11 or not all the programs in use had been adequately  
12 verified.

13           And it was at that juncture that we made our  
14 report. And to go back to a question that Judge Lamb  
15 raised, about what encourages a licensee to be timely, if  
16 its judged that you haven't been, you are cited for  
17 lateness, so you have to be very diligent.

18           We thought we were being very diligent, and I&E  
19 didn't agree with us on this particular point.

20           (No, Hiatus.)  
21  
22  
23  
24  
25

1 Q Was that earlier finding on computer codes  
2 bizarre in the sense of being unbelievable? Is that why  
3 you say bizarre?

4 A No, bizarre in the context that the report  
5 suggested that there was no connection between the two.

6 Q Between what --

7 A The report from the auditors suggested that  
8 there was no connection between the verification and the  
9 code in use, and that wasn't the case. There was a  
10 connection, but it wasn't a very clearly articulated one  
11 and that really I felt was the bottom line of the  
12 problem.

13 Brown & Root, as I had testified earlier,  
14 argued very strongly that this was a bookkeeping  
15 matter. They were absolutely confident that those  
16 programs were adequately verified. We didn't have that  
17 same warm feeling because of the difficulty in making  
18 the relationship between the verification and the  
19 program version. We did treat it as a serious matter.  
20 We did report it.

21 And, as I said today, I believe, the work that  
22 Brown & Root had done in the following months to  
23 benchmark the programs that were in use, in every case  
24 that they had completed that work they were able to  
25 demonstrate that the programs in use had been adequately

1 verified and were working properly. They never  
2 completed that task because we had Bechtel come aboard  
3 latter part of September of 1981 and then we were into a  
4 whole different situation where Bechtel -- well, I don't  
5 want to get into how Bechtel went about the job. That's  
6 a whole different subject.

7 Q You had a discussion with the Chairman about  
8 the Incident Review Committee and the reports that they  
9 produced and you elaborated on your interaction with the  
10 Incident Review Committee.

11 Did you routinely receive the kind of reports,  
12 those reports of the final or initial reports of the  
13 Incident Review Committee that were prepared as notes --  
14 minutes of their meetings? Did you receive those  
15 minutes routinely?

16 A No. What I receive from the Incident Review  
17 Committee routinely, I can talk present tense because  
18 there was very little activity in 1981, but the current  
19 context, when a matter is reviewed by the Incident  
20 Review Committee, the results of that review, in the  
21 event of a matter of potential reportability or  
22 reportability, they telephone the inspection and  
23 enforcement branch, they write up a telephone report.  
24 They have to personally contact me and identify for my  
25 information what matters that they have determined

1 through their review have been reported or are about to  
2 be reported that are in the category of either  
3 potentially reportable or reportable. And that's  
4 strictly to keep me informed of those kind of  
5 significant developments.

6 If they can contact me before they make the  
7 report, they usually will. If they can't, they'll make  
8 the report and contact me at their earliest opportunity  
9 and hopefully within one working day of when the report  
10 is made. That constitutes the first report.

11 Q Right.

12 A Within thirty days all telephone reports will  
13 be confirmed in writing. And these reports are prepared  
14 by the people who are familiar with the problem. They  
15 are reviewed by the licensing manager. They're also  
16 reviewed by a number of engineering supervisors. And  
17 they come to my attention for my final review and  
18 signature and transmittal to the NRC.

19 Q Do you hear about it if the Incident Review  
20 Committee decides not to report? Do you get the minutes  
21 of that meeting too?

22 A I don't routinely get minutes of that  
23 meeting. I think I mentioned yesterday, the evaluation  
24 or overview of the day to day activities of that group  
25 come under the manager of licensing, Mr. Wisenburg, who

1 will be testifying before this Board in the future.

2 The kinds of areas that I will be personally  
3 in tune with will be areas where I have identified a  
4 concern that I feel needs to be evaluated. And in the  
5 event that the evaluation turns out to be not  
6 reportable, I personally make it a point to understand  
7 what was the basis for reaching the conclusion that it  
8 was not reportable.

9 But on a routine basis on matters being  
10 reviewed by others, I would not normally be in that  
11 circuit.

12 Q You were describing the current practice and  
13 you said that in 1981 there wasn't that much going on so  
14 there wasn't much occasion for interaction. In what was  
15 going on, the one or two or three events you're aware of  
16 where the IRC was called upon, was your interaction with  
17 them any different than it would be today?

18 A No, we just had -- well, it was a little  
19 different. I'm just trying to think of anything that's  
20 really significant.

21 Q Let me ask a specific question --

22 MR. AXELRAD: He was trying to --

23 MR. SINKIN: Okay. Fine.

24 MR. AXELRAD: I believe the witness was trying  
25 to answer your question. I don't know if the witness



1 was finished. If the witness is finished, that's fine.  
2 I just want to be sure he gets a chance to answer.

3 THE WITNESS: I was hoping Mr. Sinkin would  
4 use those powers of observation and recognize that the  
5 witness is thinking. He made that observation a couple  
6 days ago when I wasn't thinking.

7 A I'm just trying to recollect any really  
8 significant difference. I think there's a lot of  
9 mechanistic differences which I'm not sure really  
10 address the thrust of your question. There was so  
11 little activity going on in that time frame that I  
12 hesitate to even recall beyond the matters that we  
13 reported from Quadrex what came up for review and report  
14 from the period of when I came aboard in October of 1980  
15 until the point in time when the decision had been made  
16 to change engineers. There was very little activity.  
17 I'm hard pressed to highlight any very significant  
18 differences.

19 I think the important difference that we  
20 brought about very early on was changing to whom in the  
21 Nuclear Regulatory Commission these reports were being  
22 furnished. When I first arrived they were being  
23 furnished to the resident inspector and we changed that  
24 to ensure that it was being made to the headquarters at  
25 Region 4 and parallel communication would be made to the

1 resident inspector. But that was just to keep the  
2 resident inspector informed, which we routinely do in  
3 any event. But I didn't see that as the proper official  
4 notification. I thought it ought to go to Region 4  
5 because that's where the information has to get. That  
6 was one significant change or difference I should say.

7 Certainly the names of the people that were  
8 key to the process were a little different. In that  
9 period at the time of Quadrex, Mr. Robertson was then a  
10 licensing manager, today it's a Mr. Wisenburg. The  
11 reporting relationships are essentially the same. Mr.  
12 Robertson reported directly to me in 1981, Mr. Wisenburg  
13 reports directly to me in 1985.

14 I don't really think there was all that many  
15 differences that I can recall.

16 Q (By Mr. Sinkin) Okay. The Chairman compared  
17 the minutes of an IRC meeting, I think he found an  
18 example and you reviewed that example, the minutes of an  
19 IRC meeting with --

20 MR. SINKIN: Does that not meet your  
21 recollection, Mr. Axelrad?

22 A I don't recall any --

23 MR. AXELRAD: He asked me.

24 I do not recall any actual seeking out and  
25 finding any minutes of an IRC meeting and comparing that

1 to anything.

2 MR. SINKIN: Perhaps the Chairman just held it  
3 up.

4 Q (By Mr. Sinkin) Do you remember viewing the  
5 IRC minutes that had -- where they actually put down why  
6 they didn't report something and the Chairman asked you  
7 if at the May 8th meeting you had anything similar?

8 A I think you're confused.

9 MR. AXELRAD: I believe that the Chairman  
10 referred generally to minutes of the IRC, but I don't  
11 recall the Chairman actually showing anyone any  
12 document.

13 Q (By Mr. Sinkin) All right. It's not  
14 important whether you were actually shown a document.  
15 I'll drop that part of the question.

16 Do you remember the dialogue between the  
17 Chairman and yourself about the level of detail on IRC  
18 minutes versus the level of detail on your May 8  
19 meeting?

20 A I remember a question from the Chairman on  
21 that, yes.

22 Q In your answer you stated that the depth of  
23 records for non-reportability in your meeting was not  
24 quite as extensive as the IRC records. Do you remember  
25 that?

1           A     I think I said they may not have been. That  
2 subject -- since we had that dialogue yesterday, I  
3 happened to have the opportunity to refresh my memory in  
4 talking with my licensing manager and it isn't clear  
5 that the detail is any less than what you will find in  
6 normal IRC minutes. The IRC minutes will identify which  
7 way a decision was made and they'll give a basic reason  
8 and we had very similar visibility based on the  
9 decisions that we made on May the 8th. So, I would  
10 clarify my remarks yesterday by saying I suspect the  
11 level of detail is very similar.

12           Q     And who is that that you refreshed your memory  
13 with? Mr. Wisenburg?

14           A     I spoke with Mr. Wisenburg, the licensing  
15 manager, who is very familiar with the minutes kept by  
16 the IRC.

17           Q     Has Mr. Wisenburg ever seen the minutes of the  
18 May 8th meeting?

19           A     He's familiar with minutes being maintained by  
20 the IRC. He's visited minutes of the IRC in days gone  
21 by and he's somewhat aware of the information that we  
22 used to make our decisions on May the 8th. They were  
23 exhibits furnished to this Board. And I just got the  
24 impression and understanding the character of the  
25 minutes, that I'm not sure there's much difference in

1 the degree of detail in the minutes of the IRC versus  
2 the information we used and documented on our meeting of  
3 May the 8th.

4 I'm not saying that Mr. Wisenburg is drawing  
5 that conclusion. I'm saying that based on information  
6 that he has provided myself regarding the level of  
7 detail of IRC minutes, I'm now of the opinion there may  
8 not be much difference in the degree of detail  
9 available.

10 JUDGE BECHHOEFER: Mr. Goldberg, I'm not quite  
11 sure I followed that last answer or elaboration of one  
12 of your answers yesterday. I understood that the only  
13 detail in writing that you had of the May 8th meeting  
14 was the attachment to the Brown & Root letter.

15 THE WITNESS: Yes, sir.

16 JUDGE BECHHOEFER: Now, is that the  
17 document -- and you said then that you factored in some  
18 other experience of your own and the other members of  
19 the committee.

20 Now, is the Brown & Root document the only  
21 written record of the reasons for not reporting the ones  
22 you didn't report, the findings you did not report?

23 THE WITNESS: As far as I'm aware, that is the  
24 only written record.

25 JUDGE BECHHOEFER: Is your testimony today



1 then that those records are comparable or at least as  
2 detailed as what the IRC would routinely put in its  
3 minutes?

4 THE WITNESS: It's my understanding that they  
5 are comparable. The IRC has certain key elements of  
6 information which we believe can be found on those  
7 documents. Certainly identification of the matter under  
8 consideration. There's identification as to the reason  
9 for non-reportability. And I'd say that there was some  
10 detail that Dr. Sumpter had that he did bring back from  
11 the meeting that wasn't on Mr. Saltarelli's  
12 correspondence. He knew, for example, drawing numbers,  
13 he had seen drawings. He had more information or a  
14 direct observation than one could get if you just looked  
15 at Mr. Saltarelli's input. He had, if you will, some of  
16 the backup information that he had personally seen and  
17 that wasn't on Mr. Saltarelli's document, which may have  
18 been perhaps an area where it could have been a little  
19 bit stronger.

20 JUDGE BECHHOEFER: Would that have been in an  
21 IRC record if the IRC had handled the question in its  
22 routine normal fashion?

23 THE WITNESS: Well, as I say, I got the  
24 perception they're comparable. Since I haven't looked  
25 at an IRC set of minutes, I think that I'm not giving

1 you as precise an answer as your question.

2 The feeling I got in talking with Mr.  
3 Wisenburg, and he is going to appear before the Board  
4 and I think he'll be able to give his firsthand  
5 knowledge of the contents of the minutes because, as I  
6 say, I haven't seen them, he feels that there is a lot  
7 of similarity. And I'm sure he can address where the  
8 minutes might get into an area of detail perhaps that we  
9 didn't have identified in Mr. Saltarelli's input to  
10 myself.

11 Q (By Mr. Sinkin) The Chairman asked you a  
12 question and I heard it one way and you answered  
13 another. Let me just be sure. I perhaps misheard what  
14 he was asking.

15 As I heard him ask the question, it was would  
16 a document like the document that Brown & Root provided  
17 to you be in the minutes. Now, he may have been saying  
18 would they be the same kind of document. But the way I  
19 heard the question, it was would the Brown & Root  
20 document have been in the IRC record if the IRC had  
21 handled it?

22 JUDGE BECHHOEFER: No, that --

23 MR. SINKIN: That wasn't the question you were  
24 asking? Okay, just wanted to be sure.

25 JUDGE BECHHOEFER: I was trying to inquire as

1 to equivalency.

2 MR. SINKIN: Okay.

3 JUDGE BECHHOEFER: And Mr. Goldberg's answer  
4 responded to that.

5 MR. SINKIN: Was responsive to that, yes.

6 Q (By Mr. Sinkin) Mr. Goldberg, when you were  
7 discussing the idea of the Quadrex report resulting in  
8 publicity as a reason to send the report to the Board or  
9 not send the report to the Board, you responded that  
10 when the NRC asked me if I was going to send it as a  
11 gratuitous report, my answer was no, it's on file and  
12 you can review it.

13 You didn't put a real context on that. Is  
14 that a reference to Don Selis who said -- to whom you  
15 said no, it's on file, you can review it?

16 MR. AXELRAD: Mr. Chairman, there was a very  
17 long windup to that question with a reference of the  
18 context not being clear and then a very short question  
19 being asked. Could we just make sure that we understand  
20 exactly what the question refers to?

21 MR. SINKIN: Well, what Mr. Goldberg said in  
22 his testimony was when NRC asked me if I was going to  
23 send it as a gratuitous report, I responded no, it's on  
24 file, you can review it.

25 Q (By Mr. Sinkin) What were you referring to?

1     What conversation were you referring to?

2           A     I talked to Mr. Sells in April of 1981, and I  
3     think that conversation took place after the meeting of  
4     April 13th and probably before the meeting of April  
5     30th, where I told him that I had reason to believe that  
6     the report might well contain some reportable matters,  
7     that the report was still under development, that we had  
8     gotten a preview and there was enough areas being  
9     highlighted that I suspected that something would  
10    undoubtedly, just statistically would probably end up  
11    being reportable.

12           And at that point I believe Mr. Sells said,  
13    well, he said, when you get that report, I'd like you to  
14    send me a copy. And I remember saying to Mr. Sells,  
15    well, I wasn't planning to send a copy. The copies will  
16    be available in the working files of Houston Lighting &  
17    Power Company and the NRC has full access to those  
18    files. So, anyone who wants to review that report is  
19    welcome to come and review it to their heart's content.

20           And that was, I believe, probably the first  
21    and I don't know whether it came up again, but that  
22    would have been the first time it came up.

23           Q     You were shown a document that was supposedly  
24    the minutes of a management committee meeting Mr. Thrash  
25    took. I think it was number 44 in discovery from the

1 Applicants. Do you remember that document?

2 A The one I think was later identified to be in  
3 June?

4 Q June of 1981, right.

5 JUDGE BECHHOEFER: June the 26th, to be  
6 precise.

7 Q (By Mr. Sinkin) June the 26th, 1981.

8 My question, Mr. Goldberg, is really what  
9 we're looking at when we look at that document. Are  
10 those, in fact, the minutes of the meeting that would be  
11 in the HLaP file or the minutes of the meeting or are  
12 those something different?

13 A These are not minutes, these are notes that  
14 Mr. Thrash apparently makes when he sits there and he  
15 listens to the conversation. And then he goes about the  
16 business of referring to these notes to construct what  
17 he ultimately calls draft minutes which are routed to  
18 members of the management committee for their review and  
19 comment.

20 And I would tell you that draft notes or Mr.  
21 Thrash oftentimes have a certain disconnection with what  
22 really happens or what was really discussed because Mr.  
23 Thrash is a recorder and attempting to capture  
24 information sometimes in areas that are very complex.  
25 And sometimes he does a good job at it and sometimes he



1 misses the mark. And the vehicle by which these things  
2 are put in context is the review of the minutes  
3 themselves.

4 MR. SINKIN: I guess, Mr. Chairman, what  
5 strikes me is that we don't have the minutes  
6 themselves. And I'm not exactly sure why we don't have  
7 the minutes of these portions of the minutes that were  
8 responsive to the Board's discovery order.

9 MR. AXELRAD: I can answer that question quite  
10 readily. If we did not produce something, it's because  
11 it did not contain any information that came within the  
12 scope of the Board's request. It is quite possible that  
13 Mr. Thrash took notes of discussions that took place  
14 which for one reason or another would not show up in the  
15 formal minutes, perhaps because they did not rise to the  
16 significance or importance that Mr. Thrash would have  
17 thought deserved to be in the minutes.

18 I can assure this Board that we have provided  
19 in our document production all information which related  
20 to the matters that the Board asked us to produce.

21 MR. SINKIN: Then it's --

22 JUDGE BECHHOEFER: We do have some minutes --  
23 I might note, some minutes of those meetings were  
24 provided to us. I asked some questions about them  
25 because I wasn't sure what's a minute, what's notes,

1 what they were, so --

2 MR. AXELRAD: When minutes contained relevant  
3 information, they were produced. When handwritten notes  
4 contained relevant information, they were produced.  
5 When typewritten notes contained relevant information,  
6 they were produced. We did a painstaking job of  
7 reviewing all of the materials that we had available to  
8 us and making sure that we provided information to the  
9 Board, even though we didn't know what the document was,  
10 who the author was or what the date was.

11 MR. SINKIN: Mr. Chairman, it is my  
12 recollection that we were provided with minutes of  
13 meetings that dealt with the removal of Brown & Root.  
14 We have the September 12th, I think it is, management  
15 committee minutes and things like that. But as far as  
16 any management committee minutes relating directly to  
17 the Thrash notes of April and June and perhaps May, I  
18 don't remember us receiving any minutes of the  
19 management committee that directly reflected Mr.  
20 Thrash's notes.

21 JUDGE BECHHOEFER: Well, that's probably, as  
22 Mr. Axelrad said, because the minutes didn't have  
23 anything --

24 MR. SINKIN: Well, Mr. Chairman -- if I am in  
25 error, first of all, I'd appreciate Mr. Axelrad

1 informing me. If I'm not in error, I have an  
2 observation about that.

3 MR. AXELRAD: Mr. Chairman, I don't know what  
4 these observations are doing in the middle of  
5 recross-examination of a witness. It seems to me that  
6 if Mr. Sinkin has any complaints with respect to  
7 materials that were produced to this Board, he should  
8 take that up separately and not interrupt the orderly  
9 cross-examination of this particular witness.

10 We did, in fact, provide minutes from time to  
11 time of management committee meetings when they  
12 contained information which referred either to the  
13 Board's first request or its second request.

14 MR. SINKIN: Mr. Chairman, the question came  
15 up because Mr. Goldberg looked at the notes of Mr.  
16 Thrash of June the 26th, 1981, and said, well, these are  
17 his notes, these are not the minutes. And I recalled,  
18 well, I haven't seen the minutes.

19 I think what counsel is representing to the  
20 Board, and I just want this clearly understood, is that  
21 if there were notes of Mr. Thrash in the period of  
22 April, May, June and perhaps July that contain  
23 information about the Quadrex report and discussions  
24 about the Quadrex report at the management committee  
25 meetings, that information did not end up in the final

1 minutes of the management committee meeting; otherwise,  
2 those minutes would have been produced.

3 JUDGE BECHHOEFER: Well, that may be so, but  
4 my answer is so what. So what?

5 MR. SINKIN: Well, I'd say it's very probative  
6 of what's going on within the corporation if the minutes  
7 of the management committee meeting suddenly have  
8 nothing about Quadrex when there are continuous reports  
9 about Quadrex going on.

10 MR. AXELRAD: Mr. Chairman, this is  
11 preposterous. We have represented and will continue to  
12 represent to the Board that we have provided every  
13 document --

14 MR. SINKIN: That's fine.

15 MR. AXELRAD: -- within our knowledge that  
16 contains information of the type that the Board  
17 specifically asked us to produce in its two orders on  
18 that subject. And I believe that this particular  
19 conversation should be cut short at this point.

20 MR. SINKIN: I'm finished, Mr. Chairman.

21 JUDGE BECHHOEFER: We have no question that  
22 you did so. I think any of the parties can draw any  
23 implications they want to from --

24 MR. AXELRAD: Exactly.

25 MR. SINKIN: That concludes my recross, Mr.

1 Chairman.

2 JUDGE BECHHOEFER: Mr. Reis?

3 MR. REIS: The Staff has a few questions.

4

5 RECROSS EXAMINATION

6 BY MR. REIS:

7 Q Mr. Goldberg, you testified in relation to  
8 finding 4.6.2.1(n), you testified that essentially that  
9 B&R was redoing some calculations involving the  
10 essential cooling pond.

11 A Yes, sir.

12 Q Isn't that so? Okay.

13 In these recalculations, were they looking at  
14 the heat that would be received by the essential cooling  
15 pond with one unit operating at full load and an  
16 emergency shutdown of the other unit?

17 A Yes.

18 Q What did they intend to do with that -- do you  
19 know of your knowledge what they intended to do with  
20 that recalculation for that particular scenario?

21 A One unit operating at full load and one unit  
22 coming down because of a postulated accident really?

23 Q Right.

24 A Well, they always had that scenario. There  
25 were -- let me see if I can at least make sure that



1 we're working with the same information.

2 When Quadrex made their review, there were two  
3 conditions prescribed by the regulations that should be  
4 analyzed in developing your confidence in the design for  
5 this particular feature. One was to treat an accident  
6 in one plant simultaneous with having to shut down the  
7 other plant and then the case of shutting down both  
8 plants simultaneously.

9 They couldn't find, I don't believe, as my  
10 understanding serves me, the calculations for both  
11 plants shutting down simultaneously. Quadrex was of the  
12 view that that would be the controlling situation and  
13 they apparently had run some "back of the envelope"  
14 calculations that told them that the temperatures could  
15 likely be higher peak pond temperatures.

16 In reviewing that subject, what was found was  
17 that there was, in fact, a prior analysis, but they  
18 didn't find the analysis. They had records to show that  
19 at least the analysis had been done. It had been  
20 reported as having been done in the FSAR. Since Brown &  
21 Root was revisiting the whole subject anyway by redoing  
22 calculations, we felt that all the things that were  
23 appropriate to be done about this particular problem  
24 were in progress. And the only problem that we knew was  
25 that we couldn't seem to find the calculations for the

1 case of both units shutting down simultaneously.

2 Q Calling your attention to Applicants' Exhibit  
3 28, the Quadrex report, and particularly --

4 MR. AXELRAD: 60.

5 Q (By Mr. Reis) 60, Applicants' Exhibit 60,  
6 question N-17. In the second page of N-17 there is some  
7 material underlined there.

8 MR. AXELRAD: One minute, Mr. Reis, we haven't  
9 given him a copy yet.

10 MR. REIS: Okay.

11 Q (By Mr. Reis) The material underlined in the  
12 second paragraph, did Brown & Root recognize -- to your  
13 knowledge, going back to May 7th and 8th, 1981, if you  
14 can recall your knowledge at that time, did Brown & Root  
15 recognize that there was a need to keep one unit  
16 operating at full -- to model a -- I'm sorry, strike  
17 that -- to design the plant to keep the essential  
18 cooling pond so that one unit could be at full power and  
19 the other unit shut down in an emergency situation?

20 A Keep one unit at full power while we were  
21 undergoing emergency shutdown of the other unit?

22 Q Yes.

23 A I'm not really sure. I'm not really sure.

24 Q Isn't that the essence of what Quadrex is  
25 saying here, that Brown & Root did not consider that

1 scenario as a safety matter to be factored in?

2 A Well, you have me at a disadvantage because my  
3 understanding of the limiting conditions prescribed for  
4 demonstration of an adequate pond from the standpoint of  
5 the reg guide talks about two particular conditions, one  
6 being the case of both units having to shut down  
7 simultaneously that might well be brought upon by some  
8 impending earthquake or serious other anomaly; and the  
9 other condition being to demonstrate that given an  
10 accident in one plant and the need to shut down the  
11 second plant, that you would then have the heat load  
12 from the faulted plant and the heat load associated with  
13 shutting down the other plant. Those, as I understood  
14 it, were the two limiting conditions prescribed in the  
15 reg guide.

16 (No hiatus.)

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1 Q (By Mr. Reis) Mr. Goldberg, you testified in  
2 answer to Judge Lamb and other questions on re-cross  
3 examination, that in your review during the -- on May 7  
4 and May 8, you had in your mind generally the question of  
5 whether the Quadrex report as a whole, should have been  
6 turned over to the Board. Is that so?

7 A That question did, in fact, cross my mind, yes.

8 Q In addition to crossing your mind, did you  
9 specifically examine it?

10 A Well, in the course of reviewing the report, I  
11 think the review of the report may have preceded that  
12 matter crossing my mind. So I think it's fair to say, I  
13 had gotten the flavor of the report before I asked myself  
14 that question.

15 Q What I'm trying to get at is: Did you  
16 specifically ask yourself that question or did you just  
17 have these matters in the back of your mind?

18 A I looked at the report and I think it conjured  
19 up a lot of questions. First question is, "What do we  
20 have here?"

21 And in reading the report, it certainly sounded  
22 like it was a very potentially significant situation,  
23 covered a lot of areas, and it suggested that there may  
24 be a lot of things that are at sorts with the manner in  
25 which they should be carried out.

1           As we were going through the review, and trying  
2 to understand the impact of what we had, I knew that  
3 anything that was reported would have to go to the  
4 inspection and enforcement branch; the character of the  
5 report struck me as being, you know, isolated -- or not  
6 isolated, but it was confined to subjects of engineering  
7 activity.

8           That's the catalogue in my mind of what I was  
9 looking at. And I do recall asking myself subconsciously  
10 or otherwise, "What is the Board addressing?" And I  
11 didn't make the connection.

12           It's not a matter of writing out a question and  
13 then supplying myself an answer; it was a reflection and  
14 the thought process as we were handling this report.

15           Q     You said "subconsciously or otherwise." What  
16 do you mean by "otherwise"?

17           A     It was, my best recollection, it was a thought  
18 that had crossed my mind.

19           Q     Okay. Now, there was a lot of testimony that  
20 you, Mr. Robertson and Dr. Sumpter reviewed the report  
21 rather than sending it to the IRC.

22                     Was that motivated in any way by the close --  
23 was your review in contrast to the IRC's review motivated  
24 in any manner by the imminence of the hearings that were  
25 to take place before the Board?



1 A Not at all.

2 Q Thank you.

3 A I'd like to just expand on that question if I  
4 might. I think the most important aspect of the Quadrex  
5 review was that it was really taking a snapshot of an  
6 operation that was in progress, and if I felt comfortable  
7 with just asking HL&P engineers to go out and make that  
8 the evaluation, I would have. I just didn't feel that  
9 that would have been appropriate from two points of view.

10 One, they were intimately involved in the  
11 day-to-day activities of the job. And two, I still  
12 didn't have a comfortable feeling as to who all the  
13 heroes were, where I could really have high confidence of  
14 day-to-day job performance. I was getting still to know  
15 a lot of the team.

16 And I didn't have much contact with the IRC  
17 either, to understand their strengths. And it struck me  
18 that taking the most senior nuclear engineer who had been  
19 in charge of licensing, who had the direct responsibility  
20 for making these reports, chairman of the IRC is a  
21 licensing engineer, so I had the past licensing manager,  
22 most senior officer; I had the new licensing manager who  
23 I had hired with vast prior experience in both the  
24 utility and the architect engineering field, and it just  
25 struck me that I had the most potent team who had about

1 as much independence from the day-to-day project  
2 activities I felt was needed to make that kind of an  
3 assessment.

4 Q Going to what has been identified as document  
5 44, the Thrash notes of the June 26, 1981 management  
6 meeting, I notice letters RL and RLQ on that. Can you  
7 tell me what those letters mean; do you know?

8 A I am going to speculate that RL refers to R.L.  
9 Hancock, who was the management committee representative  
10 of the City of Austin. And I'm going to speculate that  
11 RLQ represents a question raised by R.L. Hancock.

12 Q I know you didn't prepare these notes, Mr.  
13 Goldberg, but I'm going to ask you any way. It says  
14 below, just above where it says 1124, "Gold has refused  
15 to send." And that refers to the Quadrex report, "to  
16 NRC." And I'm going to ask you when it says "refused,"  
17 had anybody asked you to send the Quadrex report to NRC  
18 at that point?

19 A The only person who ever asked for a copy of  
20 the report was Mr. Sells. I had told Mr. Sells that we  
21 did not plan to submit this report as a formal document;  
22 it would be available, as are so many other reports  
23 regarding the health and state of the union, if you will,  
24 of the project, be on file in the company records, that  
25 it is available for NRC review as is all the other

1 records of our business regarding matters of interest to  
2 NRC.

3 Clearly, I had never refused an official  
4 request that this report be supplied for the record.

5 Q One other question in regard to the word  
6 "refused." Was there any -- did anybody at this meeting  
7 ask you to send the report to the NRC?

8 A No. There was absolutely no conversation that  
9 I can recall by our management committee that would have  
10 made a suggestion that this report be shared with any  
11 public body. Had that been the case and had that been  
12 the wishes of the management committee, it would surely  
13 have been accommodated.

14 MR. REIS: Mr. Chairman, there's been a lot of  
15 talk about this document in here and I don't know whether  
16 it's appropriate to accompany the record. Certainly it  
17 is not appropriately identified for an exhibit, but I was  
18 just wondering whether you would see it as appropriate  
19 accompanying the record. I don't feel strongly about it.

20 JUDGE BECHHOEFER: I don't think it's --

21 JUDGE SHON: I think it's appropriate --

22 JUDGE BECHHOEFER: Well, I think it's  
23 appropriate. Unfortunately. My copy has marks on it  
24 that should not go into the record, probably, which was  
25 one of the reasons I made no suggestions for having my

1 copy accompanying it, at least a Xerox thereof.

2 MR. AXELRAD: If the Board wishes, we can  
3 provide copies of that document to travel with the  
4 record.

5 JUDGE BECHHOEFER: In addition, the Board was  
6 perhaps -- if Mr. Poston should be a witness, we perhaps  
7 were going to ask him questions on it as well. We have  
8 ruled on -- we haven't ruled on that or decided on that  
9 yet, but since Mr. Poston was the only one who can answer  
10 our question on the statements concerning intervenors, we  
11 had decided to wait until he came, if he does come, to  
12 decide whether it should formally go in the record.

13 But in any event, we would have no objection to  
14 it traveling with the record. But at this stage, someone  
15 else would have to provide the copies or Xerox's.

16 MR. REIS: Well, the staff will let it be a  
17 staff exhibit providing it is not introduced for  
18 identification, just to illustrate the --

19 JUDGE BECHHOEFER: It will be introduced at  
20 some point.

21 MR. REIS: Well, at this point, to illustrate  
22 the record. And providing it is not introduced, just for  
23 identification. I think that's number -- that would be  
24 staff Exhibit 148 for identification.

25 JUDGE BECHHOEFER: It might say that it might

1 not be necessary to include as part of that the  
2 handwritten notes which were attached to the documents  
3 which were sent to us. I will leave that up to other  
4 people. But at least I don't think the Board --

5 MR. AXELRAD: If it's marked for identification  
6 as a staff exhibit, perhaps it can be marked as being one  
7 typewritten page.

8 MR. REIS: One typewritten page. And I take it  
9 the Applicant will we reproduce it?

10 MR. GUTTERMAN: Certainly.

11 MR. REIS: Thank you.

12 JUDGE BECHHOEFER: Okay, these notes of June  
13 26, 1981, the one typewritten page only, will be marked  
14 for identification as staff Exhibit 148.

15 MR. REIS: Mr. Chairman, I might point out that  
16 we do not have -- we do have a list of exhibits we intend  
17 to introduce. It can't be staff 148, because we haven't  
18 even identified other exhibits at this point. And this  
19 number had been one to go after our present numbers.

20 MR. AXELRAD: We'd be glad to identify it as  
21 Applicant's exhibits -- what's our next number?

22 JUDGE BECHHOEFER: 70.

23 MR. AXELRAD: Applicant's Exhibit Number 70.

24 JUDGE BECHHOEFER: Okay. Why don't we make it  
25 Applicant's Exhibit 70.



1 MR. REIS: For identification.

2 JUDGE BECHHOEFER: For identification, that is.

3 (Applicants' Exhibit 70 marked

4 for identification.)

5 JUDGE BECHHOEFER: Do you have further

6 questions.

7 MR. REIS: No, Mr. Chairman, the staff has no

8 other questions.

9 JUDGE BECHHOEFER: I have a couple.

10 JUDGE SHON: Go ahead.

11

12 BOARD EXAMINATION CONTINUED

13

14 BY JUDGE LAMB:

15 Q I may have neglected to ask you this yesterday,

16 Mr. Goldberg, but I'd like to do it just to make sure

17 that we get this in the record.

18 With respect to report -- submitting the

19 Quadrex report to this Board, did anybody on the NRC

20 staff suggest that, to your knowledge, to you or others

21 in HL&P before September?

22 A No.

23 Q Now, in your past professional activities, have

24 you observed lawyers functioning as legal advisors to

25 managers and executives in connection with contracts,

1 changes in contracts and potential licensing implications  
2 as a result of program modification?

3 A Yes, I have.

4 Q Now, with respect to Mr. Newman's participation  
5 in decisions involving B&R requests, questions have been  
6 raised as to whether that participation was in effect in  
7 a company management role, or as a lawyer practicing his  
8 profession on behalf of a client. What are your  
9 observations on this matter?

10 A I think Mr. Newman certainly carried out his  
11 obligations as an attorney providing legal advice both in  
12 the licensing areas and the contracts area.

13 It's fair to say that when Mr. Newman would be  
14 in company with Mr. Oprea and myself and then later with  
15 Mr. Jordan, he expressed opinions on matters that were  
16 under discussion. But clearly the decisions of matters  
17 of changing contractors were management decisions that  
18 were made, as you heard yesterday, by Mr. Jordan. And  
19 Mr. Newmans' role was strictly to provide advice in the  
20 principle areas that I outlined.

21 He had an opinion about some of the people that  
22 we met that he would share with me. Mr. Newman was not  
23 an expert in the management of the project and he could  
24 express an opinion if he wished and I could use it as I  
25 saw fit.

1           Q     Do you judge that Mr. Newman was functioning in  
2     a role that reasonably could be characterized as a  
3     manager or executive or decision maker within or on  
4     behalf of HL&P?

5           A     No. And I think to a large extent, in my mind,  
6     I think I know the role of an attorney. Some people  
7     might perceive attorneys in a broader role.

8                     Mr. Newman, to the best of my knowledge,  
9     functioned as an attorney. He made appropriate  
10    recommendations in matters that we sought his advice. He  
11    gave, from time to time, personal opinions about things  
12    that he was certainly a party to hearing, as I tried to  
13    illustrate earlier. And that was not any kind of a  
14    management role.

15                    That was just the fact that he happened to be  
16    present during a conversation about a management matter  
17    and his opinions were treated just nothing more than a  
18    personal opinion.

19           Q     So based on your prior experience, would you  
20    judge that he was serving in ways that are consistent  
21    with what you've observed for lawyers who are advising  
22    management or practicing the legal profession under  
23    similar circumstances?

24           A     Absolutely. I saw no difference.

25                    JUDGE LAMB: Thank you.

1           Q     (By Judge Bechhoefer) Just a follow-up on that  
2 for a minute. I don't have the particular document with  
3 me, but some time ago, when Mr. Sinkin filed a motion to  
4 reopen the Phase I record, we were given documents  
5 prepared by various members of the -- at least the three  
6 member committee which provided advice to Mr. Jordan and  
7 it appeared that Mr. Newman as well as the other two  
8 members wrote memoranda recommending particular  
9 contractors.

10               My recollection is that Mr. Newman recommended  
11 one contractor, you perhaps recommended another. Do you  
12 think that in that role, Mr. Newman was performing  
13 strictly legal services or perhaps might his role be --  
14 have some at least managerial traits to it?

15           MR. AXELRAD: Mr. Chairman, if I may just ask  
16 you to clarify one question, one part of your question.  
17 You said you recall something about memoranda being  
18 prepared?

19           JUDGE BECHHOEFER: Yeah, they had some blanks  
20 and we were advised at least that Mr. Newman filled in  
21 the blanks one way, and Mr. Goldberg perhaps filled it in  
22 with another name in it.

23           MR. REIS: Mr. Chairman, I can't follow the  
24 question at all when you talk about blanks and perhaps --

25           MR. B&R: I think I can clarify.

1           MR. REIS: I can't follow whether you're  
2 talking about a legal document, about a contract, about a  
3 form contract, about a makeup final -- or what we're  
4 talking about --

5           JUDGE BECHHOEFER: None of the above.

6           MR. REIS: I'm completely lost.

7           JUDGE BECHHOEFER: I'm talking about particular  
8 memorandum about which we were given copies.

9           MR. AXELRAD: The replacement report that  
10 contained blanks.

11          JUDGE BECHHOEFER: Yes, I guess that's the  
12 name. I don't have the document in front of me.

13          MR. AXELRAD: Let me make sure I understand.  
14 There was a draft replacement report of September 8th  
15 that contained some blanks as to what the selected  
16 company would be and then later on there was the final  
17 report.

18          Now, there is nothing that I can recall that  
19 would indicate there were various versions of that  
20 document prepared by various parties. There was one  
21 draft report.

22          JUDGE BECHHOEFER: No. It was my impression  
23 that each member of the committee prepared his own  
24 version, filled in the blanks with the company that he  
25 wants. And I'm not only sure what name is, because I



1 don't have the document in front of me.

2 MR. SINKIN: I think this is the document that  
3 you're referring to, Mr. Chairman. It's admitted as  
4 CCANP 78. It belongs in the back where it would be  
5 filled in with who was to be favored as contractor.

6 At the same time, Mr. Chairman, I think the  
7 description you've given of that document more apparently  
8 applies to a different set of documents than to this  
9 document. If I remember, they were rating sheets.

10 JUDGE BECHHOEFER: That is what I was intending --  
11 I was not intending to describe this.

12 MR. SINKIN: Okay.

13 JUDGE BECHHOEFER: I guess it must be rating  
14 sheets.

15 MR. AXELRAD: If you wish to ask Mr. Goldberg a  
16 question with respect to rating sheets, I think that's  
17 fine. I just want to make sure we knew what documents  
18 you had in mind.

19 JUDGE BECHHOEFER: Is that -- if I'm correct,  
20 there was a sheet prepared by each member of the  
21 committee, including Mr. Newman.

22 MR. AXELRAD: Why don't you ask the witness.

23 Q (By Judge Bechhoefer) Mr. Goldberg, is that  
24 correct?

25 A I remember when we met on the morning of

1 September 12th, that Mr. Oprea and I had developed a --  
2 we might -- we might have even had some conversations  
3 with Mr. Newman about the attributes that we were going  
4 to evaluate. But to the best of my knowledge, Mr. Oprea  
5 and I evaluated the contractors in a broad range of  
6 areas of interest on management capability, experience,  
7 technical competence, quality of the people that were  
8 willing to commit to the job.

9 And Mr. Newman had provided advice on the  
10 strengths that he saw in the areas of licensing, and  
11 regarding the commercial terms that he felt we would be  
12 able to negotiate with these people, contractors.

13 Mr. Newman did not, to the best of my  
14 knowledge, rate the contractors in the areas of  
15 management competence and technical competence. That was  
16 areas that Mr. Oprea and I participated in. And it was  
17 through a process of trying to reduce a host of  
18 observations to some way of giving ourselves and -- well,  
19 giving ourselves a way of deciding who did we think was  
20 really the stronger.

21 And it turns out that Mr. Oprea and I didn't  
22 quite come to the same conclusions, but we gave Mr.  
23 Jordan, when he joined the group, the benefit of our  
24 feelings about where we thought this came out in terms of  
25 who had the strengths. And I believe Mr. Newman's

1 remarks were confined to those areas of licensing,  
2 commercial terms.

3 If he expressed an opinion about anything else,  
4 it was an opinion of a very casual nature, it was he was  
5 not asked to provide us insights on management  
6 competence. That's not an area, with no disrespect to  
7 Mr. Newman, I don't ask Mr. Newman how to manage a  
8 nuclear project.

9 Q Did he not, in fact, have a bottom line on that  
10 that he suggested that Stone & Webster be selected?

11 A My personal bottom line was that I thought that  
12 given all the issues and areas of interest that we had to  
13 consider, I felt that Stone & Webster offered -- I  
14 personally thought that Stone & Webster offered the  
15 strongest candidate.

16 Mr. Newman was very impressed with Stone &  
17 Webster's licensing capability and he was also impressed  
18 with the manner in which Stone & Webster was going to  
19 handle the licensing aspects of the takeover.

20 He thought that they had a pretty good  
21 strategy. And he shared that with Mr. Jordan as we did  
22 Mr. Oprea and myself. Mr. Oprea felt that Bechtel had  
23 the strongest opportunity for success, so we had  
24 basically a split.

25 Mr. Oprea wanted Bechtel; I thought Stone &

1 Webster was the better choice. Mr. Jordan considered all  
2 the matters, all the inputs from Mr. Oprea and myself,  
3 and in those limited areas from Mr. Newman. And I guess  
4 he could have made the decision without our input. But  
5 he made his decision.

6 Q So you would consider Mr. Newmans' role which  
7 you've just described still as a legal role?

8 A Yes, sir.

9 Q Rather than as a management team, making a  
10 recommendation, comparable to your own?

11 A I'm very clear on that point. I only saw Mr.  
12 Newmans' input, in an extremely limited area.

13 Q Okay. Following up on a question that Mr. Reis  
14 asked you, and I guess Mr. Sinkin as well, with respect  
15 to finding 4.6.2.1(n), have you ever received any sort of  
16 a notice of violation with respect to that finding?

17 MR. AXELRAD: I'm sorry, Mr. Chairman, was the  
18 question did you know before May 8, or have you since May  
19 8?

20 Q (By Judge Bechhoefer) Have you ever?

21 A Not that I'm aware of.

22 Q And I take into account Mr. Taylor's opinion on  
23 that which I think we discussed earlier was different  
24 from your own.

25 A Yes. And I'm -- I think its fair to say that

1 Mr. Taylor had -- I have to believe certain time window  
2 and a certain amount of resources at his disposal to make  
3 his review. I would suspect he may not have had as much  
4 input available to him as I think we had available to us.

5 We had literally the whole Brown & Root  
6 organization helping to understand the character of these  
7 particular findings. I would only point that out that I  
8 suspect that there is a different frame of reference on  
9 information available.

10 Q One final area which we've talked about  
11 considerably and has been raised a couple of times. I  
12 guess I started it, but in terms of documentation of the  
13 May 7 or May 7 and May 8 meetings on whether particular  
14 findings should be reported, and the comparability to the  
15 IRC documentation of that, did you discuss with anyone  
16 around that period of time or I should say any member of  
17 the IRC, when and how the findings should be -- the  
18 reportability of the findings should be documented?

19 A To the best of my knowledge, I didn't give any  
20 explicit instructions on documentation of the reported  
21 findings beyond requesting the chairman to make the  
22 telephone report to the I&E branch that evening, which  
23 was his normal responsibility.

24 And then from then on, to the best of my  
25 knowledge, the documentation would be handled in



1 accordance with the normal practice.

2 Q All right. Did you have any conversation --  
3 well, conversations with Mr. Blau about that subject?

4 A Not that I can recall.

5 Q Well, Mr. Blau was on the IRC at the time, I  
6 think you testified?

7 A I think he was the engineering member of the  
8 IRC at that time.

9 Q Could your counsel show you the document that  
10 was numbered 17 in the first group of documents?

11 MR. SINKIN: Could you give a little more  
12 identification of what that is?

13 JUDGE BECHHOEFER: It's some notes of Mr. Blau;  
14 I'm not going as to ask him so -- he's probably never  
15 seen these, so --

16 MR. PIRFO: What was that?

17 JUDGE BECHHOEFER: No. 17, some notes of Mr.  
18 Blau.

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25

1 Q I'm only going to direct your attention to  
2 items number 9 and 10. But first, have you ever seen  
3 these notes before?

4 A No, sir.

5 Q I suspected that.

6 Do items number 9 and 10, the ones that are  
7 listed at 5:00 and 6:00 o'clock, refresh your  
8 recollection at all about what might have gone on in  
9 connection with documentation?

10 A I don't recall any dialogue with Mr. Blau  
11 regarding handling of the documentation of these  
12 findings. Now, it is possible that someone else may  
13 have had a conversation with Mr. Blau. I don't recall  
14 having one.

15 Mr. Blau participated in the reviews that we  
16 had of the Quadrex material. In fact, I think that may  
17 have been raised earlier in the proceeding about Mr.  
18 Blau's presence --

19 Q Right. Well, that's why I --

20 A Mr. Blau was also the acting engineering  
21 project manager at this point in time. That's the main  
22 reason he was sitting in on these reviews of the Quadrex  
23 findings. He was the senior most engineer assigned to  
24 the project at that point in time. He was in an acting  
25 capacity because the gentleman who previously occupied

1 that position had transferred back to fossil  
2 engineering. That was really his previous area of  
3 specialty, that's where he went back to.

4 So, his presence at the meetings was as senior  
5 engineering representative of the project, not in the  
6 capacity of an IRC member. And I can't begin to provide  
7 any illumination on these matters. I don't recall  
8 having any conversation with Mr. Blau regarding  
9 documentation of the findings.

10 Q Thank you.

11 JUDGE BECHHOEFER: That's all the Board has.

12 Mr. Axelrad, anything further?

13 MR. AXELRAD: May I have just one minute,  
14 please?

15 JUDGE BECHHOEFER: Sure.

16 MR. AXELRAD: No, Mr. Chairman, we have no  
17 further redirect.

18 JUDGE BECHHOEFER: Mr. Sinkin?

19 MR. AXELRAD: I'm sorry, Mr. Chairman, how  
20 many times are we going to go through this process?

21 JUDGE BECHHOEFER: Just on the latest series  
22 of questions.

23 JUDGE LAMB: Latest Board questions.

24 MR. AXELRAD: On the latest Board questions.

25 JUDGE BECHHOEFER: And the one or two that Mr.

1 Reis asked. They have to be directly related to those.

2 MR. SINKIN: Or to Mr. Axelrad's redirect.

3 MR. AXELRAD: No, there is no opportunity for  
4 cross-examination on redirect.

5 MR. PIRPO: Whoever goes first would go last.  
6 And I can't understand how we can keep going on in this  
7 process ad infinitum. I mean, direct testimony was  
8 presented, he had his cross, they have had a chance to  
9 rehabilitate the witness. That would be the end of it  
10 under normal practice.

11 JUDGE BECHHOEFER: I don't think so. Normally  
12 every party has one chance to cross-examine on any  
13 information developed by any other party.

14 MR. AXELRAD: Mr. Chairman, that is not my  
15 recollection of any NRC hearing I've ever participated  
16 in. The Board can provide an opportunity for further  
17 cross-examination with respect to Board questions, but  
18 there has never been in my experience any opportunity to  
19 cross-examine on redirect.

20 MR. SINKIN: It's recross.

21 JUDGE BECHHOEFER: Look back at Phase I.

22 MR. SINKIN: It's called recross and the  
23 reason it's provided is that the Applicants are  
24 presenting additional direct testimony.

25 JUDGE BECHHOEFER: In my understanding it's

1 fairly routine. It is in my proceedings and I'm told it  
2 is in others.

3 MR. AXELRAD: Fine, Mr. Chairman. Let's  
4 proceed. I withdraw the objection.

5 JUDGE BECHHOEFER: But limited to the specific  
6 areas that were covered.

7 MR. SINKIN: If I could have just a moment,  
8 Mr. Chairman.

9

10 RECROSS EXAMINATION

11 BY MR. SINKIN:

12 Q Mr. Goldberg, when you changed the  
13 notification from resident reactor inspector to Region  
14 4, did you maintain the resident reactor inspector as a  
15 person who would be notified within twenty-four hours?

16 MR. REIS: Asked and answered.

17 MR. SINKIN: Oh, it was? I'm sorry. My notes  
18 do reflect that.

19 JUDGE BECHHOEFER: This can only be on these  
20 last series of questions also. I'm not sure how your  
21 latest one would have.

22 MR. SINKIN: Well, my notes reflect that --  
23 just a minute.

24 Q (By Mr. Sinkin) In response to Mr. Reis'  
25 questions about the scenario of the shutdown,



1 simultaneous shutdown and those kind of things, you said  
2 that for one scenario the calculations were missing; is  
3 that correct?

4 A That's my understanding, yes, sir.

5 Q But that it was shown that the calculations  
6 had been done; is that correct?

7 A There was evidence that suggested that work  
8 had been done, yes.

9 Q Was that the FSAR that --

10 A The FSAR was part of that evidence, yes.

11 Q Mr. Goldberg, do you remember in the order to  
12 show cause that the Nuclear Regulatory Commission  
13 investigators considered there was a possibility of a  
14 material false statement?

15 MR. AXELRAD: Mr. Chairman, how does that  
16 relate to the questions which have been asked?

17 MR. SINKIN: The material false statement  
18 being that the FSAR reported something had been done  
19 when, in fact, it had not been done.

20 MR. REIS: This is beyond the scope of recross  
21 and the Board questions. As we go on, we, of course get  
22 narrower and we should get narrower.

23 JUDGE BECHHOEFER: Well, this was your  
24 questions, but I don't think --

25 MR. REIS: No, I did not ask anything about

1 material false statements in the PSAR or material false  
2 statements here. And it has nothing to do, as I can see  
3 it, with anything I asked.

4 MR. SINKIN: Mr. Reis asked to go back to that  
5 scenario. Mr. Goldberg explained, as he responded to  
6 me, that there was a calculation missing. The PSAR said  
7 the calculation had been done but it wasn't there.

8 Now, the question is if you look at his  
9 previous testimony about what encourages him to make  
10 50.55(e) reports, part of it is previous times when the  
11 Nuclear Regulatory Commission has taken enforcement  
12 actions on those kind of questions.

13 MR. REIS: Mr. Chairman, we already ruled on  
14 the supposed material false statement in the first phase  
15 of this proceeding. I don't think it's probative to  
16 this matter and I don't think this is any matter I went  
17 into.

18 MR. SINKIN: All right. Well, I'll change it  
19 to just without the order to show cause.

20 JUDGE BECHHOEFER: I think that last one at  
21 least we'll sustain as it was asked before.

22 Q (By Mr. Sinkin) The PSAR said the calculation  
23 had been done. The calculation was not available, no  
24 one could find it; is that correct?

25 A And, of course, in addition to the PSAR, there

1 were engineers from Brown & Root who were confident that  
2 the work had been done.

3 Q Because they had done it?

4 A They had either done it or they had knowledge  
5 of people who did it. Some of this work in the early  
6 days was subcontracted to NUS. I don't know that the  
7 NUS engineers that may have done that work were present  
8 on May the 8th, for example, during the discussions.  
9 There may have been people who knew that other engineers  
10 had done the work. I wasn't there, so I can't begin to  
11 tell you the precise detail. There was a strong belief  
12 that the work had been done, they just couldn't find the  
13 calculations.

14 Q In discussion with Dr. Lamb you explored Mr.  
15 Newman's role and you stated that Mr. Newman acted in  
16 the areas of contracts and licensing; is that correct?

17 A That's correct.

18 Q And in those areas you would consider Mr.  
19 Newman to be a highly professional individual?

20 MR. PIRFO: Objection. I don't -- I don't  
21 see -- that wasn't -- I didn't see that in Dr. Lamb's  
22 questioning at all and I don't see where it's relevant.  
23 Where is the word highly professional --

24 MR. SINKIN: Well, I think Mr. Goldberg  
25 responded at one point in his characterization of Mr.

1 Newman that there were some areas in which Mr. Newman  
2 had a very high expertise and there were other areas I  
3 think he used management competence where he would  
4 consider what Mr. Newman said just opinion.

5 I'm trying to get a measure of why in each of  
6 these areas Mr. Goldberg would have that view of what  
7 Mr. Newman was doing. My question to him is when Mr.  
8 Newman's acting as an attorney giving advice on  
9 commercial matters and advice on licensing, if he views  
10 that as a special thing he should listen to because Mr.  
11 Newman is very professionally qualified in those areas.

12 MR. PIRFO: That wasn't the question. The  
13 question --

14 MR. REIS: Asked and answered. Asked and  
15 answered. Mr. Goldberg specifically admits that.

16 JUDGE BECHHOEFER: That was. He did make that  
17 statement, so I'll sustain that on the grounds it's  
18 already been asked and answered.

19 Q (By Mr. Sinkin) Is it your testimony, Mr.  
20 Goldberg, that other than expressing opinions in the  
21 meetings that Mr. Newman attended in this September  
22 8th-September 12th period in areas other than, opinions  
23 and areas other than commercial and licensing matters,  
24 that Mr. Newman did nothing else in areas other than  
25 commercial and licensing matters other than express

1 opinions in these meetings?

2 JUDGE BECHHOEFER: I'm not sure I follow all  
3 the nots.

4 MR. SINKIN: Is that too many? Okay. Let me  
5 try and simplify the question.

6 Q (By Mr. Sinkin) Well, let me ask you, the  
7 rating sheets that the Chairman brought up, did Mr.  
8 Newman prepare a rating sheet that rated the new  
9 contractors in every area under consideration?

10 A Not that I'm aware of.

11 Q You're not aware of Mr. Newman preparing a  
12 rating sheet?

13 A Mr. Newman gave a relative rating on the  
14 strengths in the areas of licensing and contractual  
15 terms. I'm not aware of Mr. Newman preparing a rating  
16 sheet covering the whole spectrum of skills that Mr.  
17 Oprea and I considered.

18 Q On Mr. Blau, you said at this time he's acting  
19 engineer -- engineering project manager at the time of  
20 the May 7th meeting?

21 A At the time of earlier reviews with Quadrex.  
22 I think he was in that role when we had the meeting on  
23 April 13th and on April 30th as well.

24 Q Was he eventually made engineering project  
25 manager?



1           A     No. Mr. Blau was asked to fill in as the  
2     engineering project manager until such time as I was  
3     able to acquire a person with the amount of experience  
4     that I had hoped that we could find. Mr. Blau was a  
5     good number two man that was filling in the number one  
6     spot. And that's not to take anything away from Mr.  
7     Blau. He's a very competent young man. He just lacked  
8     enough experience in my mind to be able to take over as  
9     the number one man.

10           MR. SINKIN: That's all I have, Mr. Chairman.

11           JUDGE BECHHOEFER: Mr. Reis?

12           MR. REIS: Nothing.

13           JUDGE BECHHOEFER: The Board has nothing  
14     further.

15           Mr. Axelrad, anything -- any reredirect or  
16     whatever we call it?

17           MR. AXELRAD: No, nothing further. No, Mr.  
18     Chairman.

19           JUDGE BECHHOEFER: Mr. Goldberg, I guess you  
20     can be excused.

21           THE WITNESS: Thank you, Mr. Chairman.

22           JUDGE BECHHOEFER: You're invited back this  
23     afternoon.

24           THE WITNESS: I may come back just to rest.

25           JUDGE BECHHOEFER: Thank you for your

1 patience.

2 THE WITNESS: Thank you, Mr. Chairman, and the  
3 members of the Board.

4 JUDGE BECHHOEFER: I think this might be a  
5 good time to adjourn for lunch. About quarter to 2:00.  
6 About an hour and ten minutes, I guess.

7 (Luncheon recess taken.)

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1 JUDGE BECHHOEFER: On the record. Mr. Axelrad.

2 MR. AXELRAD: Mr. Chairman, our next witness  
3 will be Dr. Jim Sumpter, who will be presented by  
4 Mr. Gutterman. Joining us at the counsel table is Mr.  
5 Steven Frantz who is also with firm of Newman &  
6 Holtzinger.

7 MR. GUTTERMAN: Just a preliminary matter, Mr.  
8 Chairman, we've had copies of Applicants' Exhibit 70  
9 which was identified before the luncheon break. We now  
10 have copies that we can distribute.

11 MR. SINKIN: I have a preliminary matter. I  
12 didn't ask for preliminary matters so I got caught. I  
13 have the transcript that Dr. Lamb loaned me, copied,  
14 which we can distribute to -- I forget the number.

15 MR. GUTTERMAN: I believe it's 90.

16 MR. SINKIN: 90.

17 JUDGE BECHHOEFER: Why don't we do both of  
18 those matters.

19 MR. GUTTERMAN: If you can hand them out at the  
20 same time.

21 MR. SINKIN: Be sure I get it right.

22 Am I doing this on an hourly rate?

23 MR. GUTTERMAN: Could we get one of yours,  
24 please? Thank you.

25 JAMES R. SUMPTER,

## 1 DIRECT EXAMINATION

2 BY MR. GUTTERMAN:

3 Q Dr. Sumpter, would you please state your name,  
4 please?

5 A Names James R. Sumpter.

6 MR. GUTTERMAN: That's a good point. I guess  
7 Dr. Sumpter has not been sworn, Mr. Chairman.8 JUDGE BECHHOEFER: Oh, yes, Dr. Sumpter. Do  
9 you swear that the testimony you are about to give is the  
10 truth, the whole truth and nothing but the truth so help  
11 you God?

12 THE WITNESS: Yes, I do.

13 JAMES R. SUMPTER,  
14 having been first duly sworn, testified as follows:

## 15 DIRECT EXAMINATION

16 BY MR. GUTTERMAN:

17 Q Start all over again.

18 Dr. Sumpter, please state your full name.

19 A My name is James R. Sumpter.

20 Q Dr. Sumpter, do you have before you a document  
21 entitled testimony on behalf of Houston Lighting & Power  
22 Company, et al, of James R. Sumpter consisting of fifteen  
23 pages, with a three page resume attached?

24 A Yes, I do.

25 Q Is that document prepared under your direction,

1 supervision?

2 A Yes, it was.

3 Q Are you familiar with its contents?

4 A Yes, I am.

5 Q Are the contents of that document true and  
6 correct to the best of your knowledge?

7 A Yes, they are.

8 MR. GUTTERMAN: Mr. Chairman, I move that the  
9 testimony on behalf of Houston Lighting & Power Company,  
10 et al, of James R. Sumpter be admitted into evidence and  
11 bound into the record as if read.

12 JUDGE BECHHOEFER: Any objections?

13 MR. SINKIN: No objection.

14 MR. PIRFO: No objection.

15 JUDGE BECHHOEFER: Okay. The testimony of Mr.  
16 Sumpter will be admitted evidence and bound into the  
17 record as if read.

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1 UNITED STATES OF AMERICA  
2 NUCLEAR REGULATORY COMMISSION

3 BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

4 In the Matter of )  
5 HOUSTON LIGHTING & POWER ) Docket Nos. STN 50-498 OL  
6 COMPANY, ET AL. ) STN 50-499 OL  
7 (South Texas Project, Units 1 )  
and 2) )

8  
9 TESTIMONY ON BEHALF OF HOUSTON LIGHTING & POWER COMPANY,  
10 ET AL.,  
11 OF JAMES R. SUMPTER

12 Q.1 Please state your name and current position.

13 A.1 My name is Dr. James Robert Sumpter and I am currently  
14 Manager-Litigation Technical Support for Houston  
15 Lighting & Power Company (HL&P).  
16

17 Q.2 Please describe your educational background and  
18 professional experience.

19 A.2 I received my B.S. in Engineering Science from  
20 Pennsylvania State University in 1965, my M.S. in  
21 Nuclear Engineering from the University of Michigan in  
22 1967, and my Ph.D. in Nuclear Engineering from Texas  
23 A&M University in 1970. From October, 1970 until  
24 August, 1972 I was employed as a Nuclear Analyst for  
25 Sargent & Lundy Engineers. During that time I was  
26 responsible for radiological systems design for several  
27 nuclear power plants, including radioactive waste  
28

1 treatment and disposal systems, area and process  
2 radiation monitoring systems, and hydrogen control and  
3 charcoal filtration systems. My responsibility  
4 included the development of design criteria, drawings,  
5 plant equipment layout, specifications, testing  
6 requirements, radiation transport and release  
7 calculations and purchase of equipment.

8 In August, 1972, I joined HL&P and served as a  
9 Nuclear Engineer until March, 1973. During that time,  
10 I participated in the evaluation of bids of nuclear  
11 suppliers for the South Texas Project (STP) and the  
12 Allens Creek Project. From March, 1973 until February,  
13 1975, I was Supervising Engineer, Nuclear Safeguards  
14 and Licensing for HL&P. In that capacity, I directed  
15 HL&P's nuclear licensing efforts for both the STP and  
16 the Allens Creek Project. I was promoted to Manager,  
17 Nuclear Services Department in February, 1975, with  
18 responsibility, at various times, for Nuclear Fuel,  
19 Nuclear Engineering, Nuclear Licensing, Health Physics  
20 and Nuclear Security for both projects. I was  
21 appointed to my current position in December, 1984. In  
22 that capacity, I coordinated HL&P technical support for  
23 the lawsuit brought against Brown & Root, Inc., (B&R)  
24 in Matagorda County, Texas. I am a registered  
25 Professional Engineer in the State of Texas, and have  
26  
27  
28

1           been appointed by the Governor to the Texas Radiation  
2           Advisory Board. A copy of my resume is attached to  
3           this testimony.  
4

5       Q.3    Please describe your professional experience in  
6           evaluating matters for reportability to the NRC  
7           pursuant to 10 C.F.R. § 50.55(e).

8       A.3    As Manager of HL&P's Nuclear Services Department, I  
9           have had considerable experience with 10 C.F.R.  
10          § 50.55(e), including managerial responsibility for  
11          HL&P's reporting of design deficiencies from February,  
12          1975 until March, 1981. As part of my responsibility  
13          for STP licensing activities, I supervised the  
14          development of HL&P and B&R reporting procedures,  
15          sponsored training seminars for HL&P personnel on their  
16          reporting responsibilities both before and after  
17          issuance of the STP construction permits, and  
18          participated in the evaluation of design matters for  
19          reportability.  
20

21       Q.4    In May, 1981, were you familiar with the B&R design and  
22           design process at STP?

23       A.4    Yes. I had been involved in the development of the STP  
24           design and with B&R's design effort since the inception  
25           of the Project and was generally familiar with the  
26           Project design and the B&R design process. My respon-  
27           sibilities as head of Nuclear Services included review  
28           of B&R System Design Descriptions (SDDs),

1 specifications, and selected drawings against  
2 applicable requi. ments, industry code provisions and  
3 operational needs, and review of selected B&R  
4 engineering procedures, including ALARA review  
5 procedures.  
6

7 Q.5 What is the purpose of your testimony?

8 A.5 The purpose of my testimony is to describe my  
9 involvement in the initiation and conduct of the review  
10 of B&R engineering undertaken by Quadrex Corporation  
11 (Quadrex), and in the review of the "Design Review of  
12 Brown & Root Engineering Work for the South Texas  
13 Project" (Quadrex Report or Report) for reportability  
14 pursuant to 10 C.F.R. § 50.55(e).  
15

16 Q.6 Please describe your first involvement with the Quadrex  
17 review.

18 A.6 My first involvement was in early December, 1980, when  
19 Mr. Jerome H. Goldberg, who was then HL&P's new Vice-  
20 President, Nuclear Engineering and Construction, told  
21 me that he desired an independent evaluation of STP  
22 engineering. Over the next several weeks, I discussed  
23 with Mr. Goldberg various areas he wished to be  
24 included in the evaluation.  
25  
26  
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28

1 Q.7 How was Quadrex selected?

2 A.7 Mr. Goldberg and I discussed the criteria to be used to  
3 select a contractor to perform the review. After  
4 consideration of a number of potential contractors, it  
5 was decided that Quadrex was the most appropriate  
6 contractor to perform the review. Accordingly, Mr.  
7 Goldberg instructed me to contact Quadrex and request a  
8 proposal.

9  
10 Q.8 Once it was determined that a proposal would be  
11 solicited from Quadrex what did you do?

12 A.8 I contacted Mr. Loren Stanley, Group Manager,  
13 Consulting Engineering Department, Quadrex Corporation,  
14 and requested a proposal for an engineering review. I  
15 indicated that we anticipated a brief two to three week  
16 review of various disciplines.

17 Quadrex promptly submitted a proposal calling for a  
18 review to begin in early February and to cover the  
19 technical disciplines which I had identified. I met  
20 with Mr. Stanley and other Quadrex personnel to discuss  
21 the specific methodology to be utilized for the review,  
22 and in late January, authorized them to proceed.

23  
24 Q.9 What additional guidance did you provide to Quadrex?

25 A.9 I elaborated on the key technical areas which HL&P  
26 desired Quadrex to examine within each technical  
27 discipline and some of the unique nuclear criteria to  
28



1 be reviewed such as single failure criterion,  
2 separation of safety-related components, ASME code and  
3 pipe stress analysis. It was decided that a series of  
4 technical questions would be prepared by Quadrex for  
5 presentation to B&K engineering personnel and that  
6 B&R's responses would be used as one of the bases for  
7 reviewing its technical engineering effort, along with  
8 Quadrex's review of various engineering "products" such  
9 as drawings and calculations. Quadrex subsequently  
10 developed draft questions and transmitted them to HL&P  
11 for comment.  
12

13 Q.10 What input did HL&P have in formulating the specific  
14 questions to be posed to B&R?

15 A.10 On January 29-30, I met with Quadrex personnel to  
16 discuss the draft questions they had developed and to  
17 provide comments I had received from Mr. Goldberg and  
18 HL&P discipline engineers. Mr. Goldberg had commented  
19 that the questions were more detailed than he had  
20 anticipated, but he did not request Quadrex to modify  
21 them. HL&P discipline engineers provided additional  
22 information regarding appropriate areas of inquiry. I  
23 continued to work with Quadrex until mid-February to  
24 refine the questions to be asked B&R. My principal  
25 objective was to assure that the areas which we had  
26 agreed that Quadrex would cover were adequately  
27 reflected in the questions.  
28

1 Q.11 Was anything else discussed at the January 30, 1981  
2 meeting?

3 A.11 Yes. Mr. Arnold Granger, HL&P's Project Engineering  
4 Manager, participated in that meeting. He explained,  
5 in general terms, B&R's engineering process and some of  
6 their key design documents (such as SDDs, technical  
7 reference documents (TRDs), etc.), in order to  
8 familiarize the Quadrex reviewers with B&R's basic  
9 engineering approach. We also discussed some specific  
10 areas where we believed B&R may have been having some  
11 difficulties, such as HVAC design and computer code  
12 verification.

13

14 Q.12 When was your next involvement with the Quadrex review?

15 A.12 I attended a number of meetings in February between  
16 Quadrex and B&R in which the Quadrex questions were  
17 further discussed and clarified.

18

19 Q.13 How was the review conducted?

20 A.13 Quadrex conducted "on-site" reviews and meetings with  
21 B&R personnel in March, 1981 at B&R's offices in  
22 Houston. During these meetings, answers to the  
23 questions were discussed and B&R engineering personnel  
24 led the Quadrex reviewers through the relevant design  
25 documents.

26

27

28

1 Q.14 Did you take part in these meetings between Quadrex and  
2 B&R?

3 A.14 Yes. I attended almost all of the review meetings and  
4 served as HL&P's coordinator for the review effort. I  
5 coordinated schedules and assisted in obtaining  
6 necessary information. Where I had specific knowledge  
7 of aspects of the STP design, or felt that certain  
8 areas required additional exploration by Quadrex, I  
9 participated in the review sessions.

10

11 Q.15 During its review, did Quadrex keep HL&P management  
12 informed regarding the status of its review and its  
13 preliminary findings?

14 A.15 Yes. As indicated in Mr. Goldberg's testimony, Quadrex  
15 met with HL&P several times during the course of its  
16 review in order to keep HL&P apprised of its efforts.

17

18 Q.16 Did you meet with Quadrex to review drafts of the  
19 Report?

20 A.16 Between April 8-10, 1981, I visited Quadrex's offices  
21 and reviewed draft copies of volumes II and III of the  
22 Report, containing the Quadrex questions, B&R answers  
23 and Quadrex "assessments."

24

25 Q.17 What was the purpose of your review of the drafts of  
26 volumes II and III?

27

28

1 A.17 I wanted to ascertain the bases for the Quadrex assess-  
2 ments, and to assure that the facts were based on the  
3 information available to Quadrex and that the Quadrex  
4 reviewers' thoughts had been clearly stated.

5 Upon returning from Quadrex's offices, I furnished  
6 the draft questions, answers and assessments to HL&P  
7 lead discipline engineers for their review.  
8 Subsequently, I received marked-up copies of volumes II  
9 and III containing the HL&P engineers' comments and  
10 forwarded them to Mr. Stanley. Although I wanted to be  
11 sure that Quadrex was working with accurate  
12 information, I did not want to influence their  
13 judgments. Accordingly, I told Mr. Stanley that HL&P  
14 was simply furnishing comments and that Quadrex did not  
15 owe HL&P an answer with respect to any of the comments.

16 I returned to Quadrex's offices on April 15-16 in  
17 order to review the latest drafts of volumes II and  
18 III. I also discussed with Quadrex Mr. Goldberg's  
19 suggestion for defining the categorization of the  
20 Quadrex findings.

21  
22 Q.18 What was Mr. Goldberg's suggestion?

23 A.18 Mr. Goldberg's suggestion was set forth in his April  
24 15, 1981 memorandum to me (Applicants' Exhibit 58) and  
25 is described more fully in his testimony. It  
26  
27  
28

1 recommended, among other things, that a category of  
2 "most serious" findings be established containing  
3 matters which might violate NRC requirements.  
4

5 Q.19 What was Quadrex's reaction to Mr. Goldberg's  
6 suggestion?

7 A.19 Mr. Stanley felt that there would be a number of  
8 findings that would not fall within any of the  
9 categories suggested by Mr. Goldberg. As a result, he  
10 indicated that the categories would be broadened and  
11 that, for example, Quadrex would include in the "most  
12 serious" category, those matters that might cause  
13 delays in licensing reviews, regardless of whether  
14 those matters violated NRC requirements.  
15

16 Q.20 What was the outcome of these discussions?

17 A.20 The definition of the categories to be utilized was  
18 refined by Quadrex. As reflected in the Quadrex  
19 Report, Quadrex expanded the "most serious" category to  
20 include items which could entail significant licensing  
21 problems, especially items which could affect timely  
22 review of the license application.  
23

24 Q.21 At any time prior to receiving the final Quadrex Report  
25 were there matters which you felt should be reported to  
26 the NRC?  
27  
28



1 A.21 No. While I had indications that there were areas  
2 which would require close scrutiny for possible  
3 reporting to the NRC, I do not believe that, prior to  
4 actual receipt of the final report, I had been  
5 presented with sufficient information to knowledgeably  
6 undertake an evaluation of any matters for potential  
7 reportability. That was the first time I saw Quadrex's  
8 actual findings in conjunction with all of the  
9 supporting information. Until I received the Report, I  
10 had only, in essence, preliminary opinions and  
11 information regarding the B&R design. This preliminary  
12 information did not provide an appropriate basis for  
13 making a reportability determination. Thus, it was  
14 necessary to await the final Report rather than  
15 engaging in a piecemeal review based upon partial and  
16 preliminary information.

17  
18 Q.22 When did you receive the final Quadrex Report?

19 A.22 On May 7, 1981, I received copies of the final Report  
20 (Volumes I-III) from Mr. Stanley and arranged for its  
21 reproduction for use by HL&P and B&R personnel. I had  
22 received volumes II and III on April 29 but did not  
23 review or distribute those volumes at that time.

1 Q.23 How was the Report reviewed for reportability?

2 A.23 In a letter to B&R on May 6, 1981, Mr. Goldberg  
3 instructed B&R to review the "most serious" findings  
4 and report to HL&P by noon on May 8 regarding the  
5 reportability of those findings under 10 C.F.R.  
6 § 50.55(e). After the meeting on the morning of May 7,  
7 B&R assigned the "most serious" discipline findings to  
8 its appropriate lead engineering personnel for review.  
9 A one page form had been prepared for the reviewers to  
10 record their reportability determination and their  
11 rationale for each of the findings. A meeting was then  
12 convened in B&R's offices at about 5:00 p.m. during  
13 which the B&R discipline engineers presented their  
14 results to various B&R personnel. Mr. Cloin Robertson  
15 and I attended the meeting.

16 The results of B&R's review were presented in  
17 writing to HL&P on the morning of May 8, 1981.  
18 (Applicants' Exhibit 62). Attachment B was a set of  
19 the forms on which B&R's reportability determinations  
20 had been documented. B&R had concluded that no  
21 findings were reportable except an item associated with  
22 HVAC design, which it identified as reportable under 10  
23 C.F.R. § 50.55(e) and 10 C.F.R. Part 21.

24

25

26

27

28

1 Q.24 What did HL&P do with this input from B&R?

2 A.24 At about 12:30 p.m. on May 8, I met with Messrs.  
3 Goldberg and Robertson to review each of the "most  
4 serious" discipline findings for reportability. While  
5 we took into account B&R's input, we made our own  
6 independent judgments as to the reportability of the  
7 individual findings.

8

9 Q.25 What did you conclude as to reportability?

10 A.25 We concluded that, in addition to the HVAC design  
11 deficiency identified by B&R, the NRC should be  
12 notified of potential deficiencies related to computer  
13 code verification and classification of shielding  
14 analyses.

15

16 Q.26 After May 8, did you have any other occasion to review  
17 the Quadrex findings for reportability?

18 A.26 Yes. I subsequently reviewed each of the Quadrex  
19 findings with Mr. Robertson to provide him with the  
20 benefit of my knowledge of the findings and to consider  
21 again whether any items which should have been reported  
22 had been missed in our prior reviews. We identified no  
23 additional reportable items.

24

25 Q.27 Are you aware of any discussion by HL&P regarding with-  
26 holding the Report from the NRC Staff?

27

28

1 A.27 No. While prior to the receipt of the Report Mr.  
2 Goldberg indicated to me that a copy would not be  
3 transmitted to the NRC Staff, there was no discussion  
4 of any intention to prevent the Staff from reviewing  
5 the Report. On the contrary, Mr. Goldberg informed me  
6 that he intended to brief Mr. Sells, NRC Project  
7 Manager for STP, on the Report. During the hearing  
8 session in Bay City during the week of May 11, 1981,  
9 Mr. Goldberg told me that he had briefed Mr. Sells on  
10 the Report and had told him that a copy would be  
11 available for his review.  
12

13 Q.28 Was the Quadrex Report maintained as a confidential  
14 document within HL&P?

15 A.28 No. Numerous copies were available at both HL&P and  
16 B&R, and I am aware of no instructions being given  
17 which would have limited access to the Report.  
18

19 Q.29 Do you think HL&P met its obligations under 10 C.F.R.  
20 § 50.55(e) in its review and reporting of the Quadrex  
21 Report?

22 A.29 Yes. A timely review of the Quadrex Report was  
23 undertaken by HL&P's most experienced management  
24 personnel aided by prompt review and advice, at HL&P's  
25 direction, from B&R, the organization most familiar  
26 with the details of the design. Despite the large  
27 number of matters to be evaluated in a short time, all  
28

1 potentially reportable matters were identified and  
2 reported to the NRC. Therefore, I believe that HL&P  
3 carried out its responsibilities under 10 C.F.R.  
4 § 50.55(e) in an expeditious and effective manner.  
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RESUME OF  
JAMES R. SUMPTER

Employment History:

Sargent & Lundy Engineers  
Nuclear Analyst, October,  
1970-August, 1972

Houston Lighting & Power  
Nuclear Engineer, August,  
1972-March, 1973  
Supervising Engineer, Nuclear  
Safeguards and Licensing, March,  
1973-February, 1975  
Manager, Nuclear Services  
Department, February, 1975-  
December, 1984.  
Manager-Litigation Technical  
Support, December, 1984-Present

Education:

B.S., Penn State University, Engineering  
Science, 6/65  
M.S., University of Michigan, Nuclear  
Engineering, 12/67  
Ph.D., Texas A&M University, Nuclear  
Engineering, 12/70

Professional  
Affiliations:

Member, Electric Power Research  
Institute, Safety Technology Task  
Force, 1984 - present  
Lecturer, University of Houston,  
Department of Curriculum and  
Instruction, Energy Course, 1982 -  
present;

Member, Texas Radiation Advisory Board,  
1980 - present; Member, Low Level  
Waste, Uranium Mining, and Fees  
Committees, 1981 - 1984; Member,  
Sunset Commission Committee, 1983 -  
present

American Nuclear Society - South Texas  
Section, Program Co-Chairman, 1977;  
Treasurer, 1978 - 1980; Vice-  
Chairman, 1981; Chairman, 1982;  
Executive Committee, 1983; National  
Society, Joint Subcommittee on  
Teacher Communications, 1983 -  
present

Registered Professional Engineer,  
State of Texas, 1979 - present  
Member, Advisory Committee on Nuclear  
Energy, Texas Energy & Natural  
Resources Advisory Council  
(TENRAC), 1980-1983;  
Member, Nuclear Operations  
Subcommittee, 1980 - 1983  
Lecturer, Institute of Energy, Economics  
and the Environment, University of  
Houston, Clear Lake City, 1979 -  
1982  
Member, Edison Electric Institute,  
Nuclear Operations Subcommittee,  
1979 - 1982  
Member, Utility Occupational Radiation  
Standards Group, 1978 - 1981  
Member, Industrial Representatives  
Committee, Doctor of Engineering  
Program, Texas A&M University,  
1977 - 1981  
Member, Technical Program Committee,  
ANS Reactor Operating Experience  
Conference, 1979  
Member, Gas Cooled Reactor Associates  
Direct Cycle Technical Advisory  
Committee, 1977 - 1980  
Chairman, Technical Session on New  
Developments in Radwaste  
Management, ASME Joint Power  
Generation Conference, 1978  
Lecturer for International Atomic Energy  
Agency (IAEA) Nuclear Power  
Projects Course, Argonne National  
Laboratory, 1976, 1977  
American National Standards Institute  
(ANSI) Steering Committee on  
Nuclear Power Plant Fire  
Protection, 1976 - 1978  
Atomic Industrial Forum (AIF) Steering  
Committee on Reactor Licensing &  
Safety, 1975 - 1978  
Secretary, American National Standards  
Institute (ANSI) Standard on  
Nuclear Power Plant Air Cleaning  
Units & Components, N509, 1972 -  
1975

Awards, Honors:

Honorary Societies: . Sigma Pi Sigma  
(Physics), Psi Chi  
(Psychology)

Fellowships: Graduate Fellowship,  
National Science  
Foundation, 1967 - 1969  
Graduate Fellowship,  
Atomic Energy Commission,  
1970 - 1972

Publications:

"BWR Liquid Radwaste System Optimization  
Studies"  
1975 Winter Meeting of American  
Nuclear Society,  
"ANS Transactions," 22 542 (1975)  
"Nuclear Power Plant Fire Protection-  
Status", AIF Conference on Reactor  
Licensing & Safety, February, 1977  
"Impact of Nuclear Regulatory Commission  
Regulations on Fire Protection for  
Nuclear Plants"-American Power  
Conference, March, 1977  
"Proceedings of the American Power  
Conference," 39, 127 (1977)  
"Working for Energy Literacy Through the  
Public Schools" - 1983 Winter  
Meeting of the American Nuclear  
Society, "ANS Transactions," 45,  
584 (1983)

1 MR. GUTTERMAN: That concludes Applicants'  
2 direct examination.

3 JUDGE BECHHOEFER: Mr. Sinkin, do we have  
4 plans?

5 MR. SINKIN: Well, Mr. Chairman, I think I just  
6 forgot to do the planning. Oh, we do have a plan, Mr.  
7 Chairman. No we don't have a plan Mr. Chairman. I'm  
8 very sorry. I can --

9 JUDGE BECHHOEFER: Would you at least come up  
10 and give us an estimate?

11 MR. SINKIN: Yes.

12 (Discussion off the record.)

13 JUDGE BECHHOEFER: Okay. You may proceed.

14 CROSS-EXAMINATION

15 BY MR. SINKIN:

16 Q Good afternoon, Dr. Sumpter.

17 A Good afternoon.

18 Q In your testimony on Page 2, at line eleven,  
19 starting at line ten, you state that you participated in  
20 the evaluation of bids of nuclear suppliers for the South  
21 Texas Project and the Allens Creek Project. By "nuclear  
22 suppliers," do you mean to include the prime contractor,  
23 Brown & Root?

24 A No, that was only the contractor which would  
25 supply the nuclear steam supply system.

1 Q I'm going to ask that your counsel share with  
2 you Appendix B for a moment, if you would, 10CFR part 50,  
3 Appendix B.

4 A I've got it.

5 Q Let me ask you to turn to criterion 3 -- I'm  
6 sorry, criterion 7, Dr. Sumpter.

7 A Okay.

8 Q My question will be whether in your view,  
9 Criterion 7 applies to the relationship between the  
10 utility and its prime contractor, as well as the  
11 relationship between the utility and any subcontractors  
12 to the prime contractor.

13 A Yes, Criterion 7 applies to the contract  
14 between the utility and its contractors for safety  
15 related services.

16 Q At line 17 on Page 2, Dr. Sumpter, you state  
17 that you were promoted to manager of the Nuclear Service  
18 Department in February of 1975. What were the  
19 responsibilities of the Nuclear Service Department in the  
20 late 1980, early 1991 period? Let's take it from August  
21 1980 to June 1981, that period of time?

22 A My responsibilities at that time included  
23 nuclear engineering, nuclear licensing, health physics --  
24 I can't recall at that time if the nuclear security  
25 aspect had been transferred over to HL&P's normal



1 Security Department or not.

2 Q You list various responsibilities at various  
3 times and that's what I was trying to do is to see if the  
4 ones you list here, nuclear fuel, nuclear engineering,  
5 nuclear licensing, health physics and nuclear security,  
6 were all a responsibility of the department at that time.

7 I believe you covered all but nuclear fuel. Do  
8 you know if it was in the department at that time?

9 A No, nuclear fuel at that time did not report to  
10 me.

11 Q And you had -- let's try and keep this time  
12 frame, August 1980, June 1981, in that time frame, you  
13 had responsibility at all times for nuclear engineering,  
14 nuclear licensing?

15 A Yes. I might clarify what I mean by  
16 responsibility.

17 Q Fine.

18 A I had engineers working for me who that worked  
19 on both the Allens Creek and South Texas Projects. And  
20 as their manager, I was responsible for the technical  
21 aspects of their work that they performed on the project.  
22 They reported to someone on the project for cost and  
23 schedule matters.

24 Q Would that have been Mr. Goldberg?

25 A Well, in engineering, they reported to the

1 engineering project manager. For licensing, I believe  
2 the lead licensing engineer or the team leader in  
3 licensing may have reported to Mr. Barker or someone  
4 directly underneath him.

5 Q So the person to whom the -- you mentioned  
6 engineering project manager as one of the people to whom  
7 some of them reported?

8 A Yes.

9 Q In this period of time, is that Mr. Blau?

10 MR. GUTTERMAN: Which period of time are we  
11 talking about now?

12 MR. SINKIN: I'm trying to stay August 1980,  
13 June 1981, as the time frame, unless I otherwise change  
14 it, that we'll be talking about.

15 A On the South Texas Project, the engineering  
16 project manager had several groups underneath him and my  
17 engineers may have been leaders of those groups or may  
18 have been in a position where they reported to the  
19 leaders of those groups.

20 Engineering project manager from August 1980 up  
21 until perhaps March of 1981 was Mr. Granger and then Mr.  
22 Blau took that position subsequent to that.

23 Q And Mr. Blau held that position from March 1981  
24 through at least June of 1981?

25 A Yes, I believe so.

1 Q Thank you.

2 When you say you had responsibility for nuclear  
3 engineering and nuclear licensing, can you give me a  
4 little greater level of detail what specific kinds of  
5 responsibilities you had? Let's start with nuclear  
6 engineering.

7 A We provided guidance to our engineers as to how  
8 they were to conduct their function on the project from a  
9 technical viewpoint.

10 In other words, what type of documents they  
11 should review, what types of technical matters they  
12 should look at. We were -- it was called a matrixed  
13 organization.

14 In other words each of the individuals on the  
15 technical side of the project had, if you will, two  
16 bosses. Their project supervisor who supervised their  
17 conduct on the project relative to productivity and cost  
18 and schedule matters, and they had a technical supervisor  
19 who oversaw the technical work that they did.

20 Q And the primary task of your engineers was to  
21 review the work being done by Brown & Root as opposed to  
22 generating their own work; is that correct?

23 A Yes, we reviewed the work that Brown & Root  
24 did.

25 Q Is that the primary description of the

1 responsibilities in nuclear engineering? Is there  
2 anything else about nuclear engineering that you would do  
3 in your responsibility?

4 A No, that was its primary function.

5 Q And how about nuclear licensing?

6 A Nuclear licensing was again similar. We  
7 provided any technical guidance to that department as to  
8 the manner in which they performed their function  
9 technically on the project.

10 Q Would that include such things as updating the  
11 FSAR when changes were made in the design engineering  
12 process?

13 A On the South Texas Project, in this time frame,  
14 the need for updating the FSAR was what I would consider  
15 an administrative matter and that would then primarily  
16 handled with the project manager.

17 Our function would be more along the lines of  
18 reviewing the updated sections, or providing any guidance  
19 we felt necessary to those engineers as to the technical  
20 content of updates to the FSAR.

21 Q In your testimony at line 22, you state, "I  
22 coordinated HL&P technical support for the lawsuit  
23 brought against Brown & Root. Your testimony used the  
24 word "coordinated" in the past tense. Are you no longer  
25 coordinating HL&P's technical support for that

1 litigation?

2 A Well, right now the lawsuit has been, if you  
3 will, tentatively settled and so there are no more  
4 actions being taken relative to -- against Brown & Root.  
5 That's why it was used in the past tense.

6 Q I see. If, for some reason, the settlement  
7 fell apart and litigation continued, you'd still be in  
8 that position?

9 A I assume so, unless something else happened.

10 Q Did part of your responsibilities as  
11 coordinator of the Houston Lighting & Power technical  
12 support for the Brown & Root litigation include reviewing  
13 the pleadings filed by HL&P in the lawsuit?

14 MR. REIS: Mr. Chairman, I object. It's not  
15 material, it's cross-examination on a collateral matter.  
16 He said what his job is; we've been going on now -- well,  
17 it isn't that long, but it's over ten minutes, about 20  
18 minutes now --

19 MR. SINKIN: Give me a break.

20 MR. REIS: -- on the qualifications here.  
21 There's no thought this person was not -- disqualified to  
22 testify. Unless some reason is shown for why we're  
23 spending this length of time on these matters, I think  
24 the intervenors' representative should be instructed to  
25 get on to another matter.



1 MR. SINKIN: Mr. Chairman, this is an essential  
2 part of my cross-examination, this particular point; even  
3 involves an exhibit. So it is certainly not a collateral  
4 matter. And I would like to proceed in two more  
5 questions to show you where I'm going.

6 JUDGE BECHHOEFER: At this point, we will  
7 overrule the objection. We will let you ask a couple of  
8 more if you want.

9 Q (By Mr. Sinkin) The question I asked, Dr.  
10 Sumpter, was: Did part of your responsibilities as  
11 coordinator of the HL&P technical support for for the  
12 Brown & Root litigation include reviewing the pleadings  
13 filed by HL&P in the lawsuit?

14 A Those pleadings that had technical content,  
15 yes.

16 Q And did you specifically review engineering  
17 matters in those pleadings?

18 A Yes, either I or a member of my staff did.

19 Q Dr. Sumpter, I'm going to show you what I ask  
20 to be marked for identification as CCANP 92.

21 (CCANP Exhibit 92 marked  
22 for identification.)

23 Q (By Mr. Sinkin) I will identify this as a  
24 ten-page document on the front about halfway down it's  
25 entitled "Plaintiff's Specification of Claims and

1 Issues." It's identified as filed by Houston Lighting &  
2 Power and others, versus Brown & Root in Matagorda  
3 County, Texas.

4 The document is an excerpt from a larger  
5 document that contains the entire specification. Do you  
6 recognize this excerpt, Mr. Sumpter?

7 A Yes, I believe I've seen this document before.

8 Q Did you review this pleading prior to it being  
9 filed with the court?

10 MR. GUTTERMAN: Mr. Chairman, I'll object to  
11 that. I don't see the relevance of this document to this  
12 proceeding.

13 MR. SINKIN: Well, I'm going to show the  
14 relevance by one more question. We first have know if  
15 he's reviewed it.

16 MR. GUTTERMAN: I'll wait and listen to the  
17 next question.

18 JUDGE BECHHOEFER: You can answer this  
19 question.

20 A I'm not -- your question was did I review it  
21 before it was filed?

22 Q (By Mr. Sinkin) Did you review this pleading  
23 before it was filed as part of your responsibility as  
24 coordinator of HL&P's technical support for the lawsuits?

25 A Do you know when it was filed?

1           Q     Well, I did attempt to identify that from some  
2 cover letters that arrived with it. The cover letters,  
3 unfortunately, identify one of the documents as to its  
4 dates.

5                 I can tell you this: The document you see is  
6 an answer to another document -- I mean, sorry -- the  
7 document you see was answered by another document from  
8 Brown & Root filed in April of 1985. They filed an  
9 answer to this specification, if that helps you at all  
10 identify when this specification was filed.

11           MR. PIRFO: There is some reason the date on  
12 which it is filed is of any importance? The witness has  
13 said he was familiar with the document. I'm not sure why  
14 we're getting hung up; why it was before or after --

15           MR. SINKIN: The witness asked me if I knew  
16 whether it was filed. Maybe it's not important.

17           MR. PIRFO: I was asking why the date is  
18 important, or why it was relevant -- we know it was  
19 filed, we know the witness did it; I'm not sure --

20           MR. GUTTERMAN: Well, I want to correct you on  
21 it. I think the point is that Dr. Sumpter took his  
22 current position in December of 1984.

23           MR. PIRFO: I'm just looking for -- I'm asking --

24           MR. SINKIN: Do you know the date, counsel?

25           MR. GUTTERMAN: I do not know the date it was

1 filed. I know that the document that the defendants  
2 filed in April was not hot on the heels of this document,  
3 it was a long time in preparation. But the exact date of  
4 this document, I do not know.

5 I do know it obviously -- that this is an  
6 incomplete document and one of the things missing from it  
7 are the pages that show the date.

8 MR. SINKIN: I have the pages where the  
9 attorneys said who they are. But unfortunately it  
10 doesn't have a date on it.

11 Q (By Mr. Sinkin) Dr. Sumpter, given that we  
12 haven't been able to pinpoint the date exactly, do you  
13 recognize this document as a document that you reviewed?

14 A I might be able to help you out. I'm looking  
15 on page 35 of 36, so beyond that, where we identified, I  
16 guess it's alleged Brown & Root engineering deficiencies.  
17 And it's my recollection when I took this assignment in  
18 December, that that information in this listing was  
19 already available.

20 So that would lead me to suggest that this was  
21 probably filed before I assumed my position in December;  
22 because when I got there, these 17 or so issues were  
23 already being reviewed in detail by various consultants  
24 and what not.

25 In other words, they'd already been identified.

1 So that would lead me to believe that this had already  
2 been filed before I took my position.

3 Q Did you have occasion to deal with the  
4 technical issues that you just pointed to on pages 35 and  
5 36? Did those come under your purview?

6 MR. GUTTERMAN: Mr. Chairman, I thought the  
7 CCANP representative assured me would show the connection  
8 with the issues in this proceeding. And I haven't sensed  
9 that yet.

10 MR. SINKIN: Well, one of the problems we have,  
11 counsel, is that he did not -- he thought he would have  
12 specifically reviewed this document but his  
13 responsibilities began apparently after it was filed.

14 If he had said, "I reviewed it," we'd have been  
15 right into it. Now, I'm trying to establish any other  
16 linkage between him and this document that might exist  
17 other than that he reviewed it.

18 MR. GUTTERMAN: I think we're wasting time on a  
19 document that's --

20 MR. SINKIN: I'll be happy to get into just  
21 some questions about this document, Dr. Sumpter.

22 Q (By Mr. Sinkin) Turning to Page 3 as  
23 identified in the document, Dr. Sumpter, it would be the  
24 second page of the document, item 33 E.

25 A D?



1 Q E, as in effort.

2 As of May the 7th, 1981, when you first saw the  
3 final -- let me determine, was it on May 7, 1981 that you  
4 first saw the final three volumes all together of the  
5 Quadrex report?

6 A Yes.

7 Q On that date, was it your opinion that Brown &  
8 Root engineering management had failed to implement  
9 effective interdisciplinary coordination and systems  
10 integration?

11 A No, that was not my opinion.

12 Q Can you tell me why that was not your opinion?

13 A System integration was an issue that through  
14 the '70s, because of the increasing complexity of NRC  
15 regulations, was becoming more visible as relative to the  
16 use of a separate group to perform this function, as  
17 perhaps a more efficient way to get this area reviewed,  
18 as to compared to ways in the past.

19 In the late '70s, we, HL&P, had began working  
20 with Brown & Root on various options and ways to deal  
21 with the increasing complexity of NRC regulations.

22 For instance, in 1978, we had what we call  
23 design review meetings with Brown & Root, where Brown &  
24 Root brought together in one room the mechanical, the  
25 electrical, the engineers and we would go down through

1 the systems. And each of these parties could hear how  
2 the other party thought the system was supposed to  
3 operate. That was our first approach.

4 We felt that was taking an inordinant amount of  
5 time away from the normal engineering functions to get  
6 prepared for those meetings; so our next view was then to  
7 talk to Brown & Root about perhaps forming a separate  
8 group to do this.

9 And after Mr. Saltarelli joined Brown & Root,  
10 he, in fact, instituted such a group and they were  
11 starting to undertake to perform this multi-disciplined  
12 systems integration.

13 So as of May 7th, 1980, I felt that Brown &  
14 Root was adequately adresssing this whole area.

15 Q May -- date was May 7, 1981?

16 A Yeah, I'm sorry.

17 Q When is it that Mr. Saltarelli set up the  
18 separate group?

19 A I believe the separate -- if systems design  
20 assurance group was set up by Mr. Saltarelli in August of  
21 1980.

22 Q And between late 1978 and August 1980, did the  
23 design review group -- was that the process by which  
24 systems integration was worked on? Those meetings were  
25 only held in 1978. Yes.

1 Q You were tracing the evolution of in process.  
2 Was something different done in '79 up until August of  
3 '80?

4 A I believe in 1979, Brown & Root engineering was  
5 performing system integration the way it had been in the  
6 past and there were also very heavily involved with show  
7 cause order.

8 Q By in the past, do you mean simply through the  
9 team leaders of the various disciplines?

10 A And review and comment of various drawings  
11 being passed around to all the affected parties.

12 Q When we speak of systems integration, looking  
13 at item E again, are you including in that  
14 interdisciplinary coordination or do you view  
15 interdisciplinary coordination and systems integration as  
16 something different?

17 A I view those as pretty much one and the same.

18 Q You would have to have good interdisciplinary  
19 coordination in order to achieve systems integration,  
20 would you say that's correct?

21 A I'm not sure if you can state which one comes  
22 before the other. It's an interactive process.

23 Q As of May 7th, 1981, was it your view, Dr.  
24 Sumpter, that Brown & Root engineers and engineering  
25 managers were unable to solve technical problems

1 necessary for licensing and completion of the design?

2 A Would you go through that again.

3 Q Actually I'm reading 33-G, that's why I thought  
4 this might be useful. If you would read that and tell me  
5 if as of May 7, 1981, this was your view.

6 MR. GUTTERMAN: Mr. Chairman, I'm having  
7 trouble connecting that phrase to any of the Quadrex  
8 findings that we're considering.

9 MR. SINKIN: Mr. Goldberg and I had extensive  
10 dialogue, Mr. Chairman, on this very topic, and he  
11 rendered his views on this topic. I'm now getting Dr.  
12 Sumpter's views on this subject.

13 MR. GUTTERMAN: Mr. Chairman, I don't think Mr.  
14 Sinkin's argument, with all due respect, addresses the  
15 issue I was raising which is the issues that the  
16 licensing Board is considering about the reportability of  
17 the Quadrex findings.

18 MR. SINKIN: It tells us the view of Brown &  
19 Root engineering that was present at the time the Quadrex  
20 review was done as one of the key people who reviewed the  
21 Quadrex report, Dr. Sumpter's views as of that date are  
22 crucial to the decisions that were made.

23 JUDGE BECHHOEFER: I can we'll overrule that  
24 objection.

25 A Would you repeat the question.

1           Q     (By Mr. Sinkin) The question was as of May 7,  
2 1981, was it your view that Brown & Root engineers and  
3 engineering managers were unable to solve technical  
4 problems necessary for licensing and completion of the  
5 design?

6           A     I cannot speak to that in a global sense,  
7 because of the fact that in 1980, I was no longer as in  
8 close contact with the project on day-to-day engineering  
9 activities because of the fact that we'd matrixed our  
10 engineers over on to both projects. I was aware of some  
11 problems that needed to be resolved in specific areas  
12 that my engineers were dealing with. And in some cases,  
13 we felt that Brown & Root was not solving those as as  
14 expeditiously as necessary. But that's the only context  
15 I can give that answer. I can't speak globally on

16          Q     You explained a moment ago the term matrixed.  
17 You mean that you had engineers under you, some working  
18 on South Texas, some working on Allens Creek and then  
19 they had someone over them covering areas other than what  
20 you covered. Is that correct?

21          A     Yes, that's correct.

22          Q     And was that still the condition in May of '81,  
23 were they still matrixed like that?

24          A     Yes, that matrixing originally occurred I  
25 believe in 1978.



1           Q     Turning to Page 32 of the exhibit as noted in  
2 the exhibit, item N, as of May 7th, 1981, was it your  
3 view that Brown & Root engineering management had failed  
4 to properly review and verify the design to ensure that  
5 changes were made and that the design was adequate and  
6 licenseable?

7           MR. GUTTERMAN: I'm not sure what that I  
8 understand what the phrase means, so maybe it will will  
9 do well to find out if the witness understands what that  
10 means to begin with.

11          Q     (By Mr. Sinkin) Do you have any problem in  
12 understanding what is being stated in item N, Dr.  
13 Sumpter?

14          A     I'm trying to figure out the connection between  
15 the clause "failed to properly review and verify the  
16 design" and the clause "to ensure that changes were  
17 made." I'm not sure I understand that connection.

18          Q     Well, in the explanations I've heard of the  
19 engineering process, you do the preliminary drawings and  
20 they're considered preliminary because you're later going  
21 to verify them. In the interim between the preliminary  
22 drawing an the verification, it's not infrequent went  
23 that there are changes that need to be made in the design  
24 that's already being used, so you review the design to be  
25 sure those changes have been made and then you ultimately

1 verify the design to be sure it incorporates all changes  
2 that should have been made. Is that a basic outline of  
3 the design process?

4 A That's roughly it. I'm not sure if the word in  
5 this sentence here verify means verify in the Appendix B  
6 B sense or verify in some -- as some lawyer may  
7 understand it, just -- I'm not sure how it means.

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1 Q I see. I see.

2 Turning to page number 35 in the exhibit, Dr.  
3 Sumpter. If you would review item 41 A, my question  
4 will be as of May 7th, 1981, were you aware of this  
5 problem. And my second question will be does this  
6 accurately reflect the problem that you were aware of?

7 MR. GUTTERMAN: Mr. Chairman, I'll object  
8 again. I can't recall that there is a Quadrex finding  
9 at issue that relates to cable tray routing and  
10 supports.

11 MR. SINKIN: Mr. Chairman, we've been through  
12 this debate. I'm not in the Quadrex findings, I'm in  
13 what was HL&P's view of Brown & Root's design and  
14 engineering work on May 7th, 1981, when they began their  
15 review of the Quadrex report. It's the context in which  
16 the Quadrex report arrives.

17 MR. GUTTERMAN: I think the witness has just  
18 testified that he didn't have detailed involvement in  
19 the design of the South Texas Project after 1978. I  
20 don't think there's been any connection between the  
21 witness and this particular item to establish that he  
22 had any knowledge or that this would form a background  
23 for his knowledge of the project.

24 MR. SINKIN: Well, that was my very --

25 MR. GUTTERMAN: And I really think that this

1 line of questioning is the most roundabout way of  
2 getting at anything that's relevant. It's going to  
3 waste an awful lot of time and it's just not directly  
4 related to any issue in this proceeding.

5 MR. SINKIN: Counsel has objected that I  
6 haven't asked the very question I'm asking, was he  
7 familiar with this on May 7th, 1981. Counsel's  
8 objecting that it hasn't been shown that he was involved  
9 in it. Well, I can't show he was involved in it unless  
10 I ask him.

11 Mr. Chairman, I have another response when  
12 you're finished.

13 JUDGE DECHHOEFER: Oh, okay.

14 MR. SINKIN: The representations that have  
15 been made as far as the meeting on May 7th -- well,  
16 actually the evaluation meeting May 8th, are that the  
17 Houston Lighting & Power personnel in that meeting  
18 brought to that meeting their knowledge and experience,  
19 their knowledge of the Brown & Root design and  
20 engineering process and their experiences with the Brown  
21 & Root design and engineering process.

22 I am testing what the knowledge of the process  
23 and the experiences with the process was as of May the  
24 7th, 1981, through some specific examples that the  
25 witness can say he either was aware of or was not aware

1 of.

2 MR. GUTTERMAN: Well, I don't want to extend  
3 the debate, Mr. Chairman, but I think we have 26  
4 specific Quadrex findings that are in issue. That's a  
5 pretty wide sample to test the witness' knowledge about  
6 the state of the design.

7 It appears to me there are something on the  
8 order of twenty or more subparagraphs in this paragraph  
9 41. If we're going to start the precedent of allowing  
10 examination on each and every one of them, we're going  
11 to be here a long time on matters that are not directly  
12 related to the issues identified in the Board's order.

13 MR. SINKIN: Mr. Chairman, I intend to touch  
14 upon a total of thirteen of the items in this pleading  
15 excerpt. We have touched on three of them already.

16 JUDGE BECHHOEFER: Well, just to prepare us,  
17 do the others, any or some of the others relate to  
18 Quadrex items?

19 MR. SINKIN: Many of them relate in the sense  
20 of calling attention to a general problem in Brown &  
21 Root's performance that Quadrex also called a attention  
22 to. As opposed to necessarily relating to the specific  
23 deficiency that made Quadrex think of that problem, they  
24 call attention to other deficiencies, in some cases, and  
25 perhaps the same deficiencies.



1 I think there are a couple that will relate  
2 directly. I look at page 37, item G, the isolation  
3 valve cubicle, I believe that was of concern to Quadrex.

4 But I trust you understand that my approach is  
5 not at the moment the specific findings of Quadrex, but  
6 rather the general observations Quadrex made of Brown &  
7 Root's design and engineering process and whether on May  
8 7th and 8th the witness had an awareness of problems  
9 that might have given him a similar view of the process  
10 even before he looked at the Quadrex report.

11 JUDGE BECHHOEFER: I think for this one we  
12 will overrule the objection, but we don't think we will  
13 permit you to go into maybe as many as you mentioned.

14 MR. SINKIN: Okay. Well, I hope we'll go --

15 JUDGE BECHHOEFER: As an example, we'll let  
16 you explore this one.

17 MR. GUTTERMAN: Mr. Chairman, as long as we're  
18 discussing the ground rules for where the examination is  
19 going, can I suggest that the examination be somewhat  
20 tied to safety-related concerns?

21 MR. SINKIN: That's fine.

22 JUDGE BECHHOEFER: Well, I would hope that all  
23 the ones he mentions are safety-related, yes, that it  
24 should be.

25 MR. SINKIN: Certainly.

1 Q (By Mr. Sinkin) Now, Dr. Sumpter, have you  
2 had a chance to review item 41 A on what is marked as  
3 page 35 of this exhibit?

4 A You want me to review 41 A as opposed to all  
5 the allegations at the introduction to number 41, that  
6 paragraph or so?

7 Q Well, I really did want to just try to -- you  
8 can certainly read the introduction as the context, but  
9 I want to try and deal with the specific examples rather  
10 than go through everything that's in the introduction.

11 A Yes, I've read 41 A.

12 Q Okay, my question -- let's see, the first  
13 question was on May 7th, 1981, whether you were aware of  
14 the problem described in this item. And the second  
15 question was whether it accurately describes the problem  
16 as you were aware of it.

17 MR. GUTTERMAN: I have two suggestions. First  
18 of all, can we have one question at a time?

19 MR. SINKIN: Sure.

20 MR. GUTTERMAN: And secondly, can we get a  
21 definition of what "the problem" means?

22 Q (By Mr. Sinkin) This 41 A is titled cable  
23 tray routing and supports, is it not, Dr. Sumpter?

24 A Yes, it is.

25 Q And it at some length describes a problem for

1 the subcontractors involved in the -- excuse me. No,  
2 strike that, this is not that one.

3 That Brown & Root was having difficulties in  
4 that there were congestion and interferences making  
5 cable pulling and electrical terminations extremely  
6 difficult. And then it goes on to evaluate why that was  
7 a problem and the more general concerns that were the  
8 basis for that problem. That's what I meant by problem.

9 Do you understand the term problem as I'm using  
10 it now?

11 MR. GUTTERMAN: I'm lost. I don't know if the  
12 witness understands it, but is the question about  
13 problems with cable pulling, problems with  
14 interferences, the fact that the sentence before says  
15 Brown & Root never completed the design?

16 MR. SINKIN: I'll ask the second -- I'll ask  
17 the second question first.

18 Q (By Mr. Sinkin) Does this describe a  
19 situation with which you were familiar on May 7th, 1981?

20 MR. GUTTERMAN: Are you talking about the  
21 whole paragraph?

22 MR. SINKIN: The whole paragraph.

23 A I was generally somewhat familiar with this  
24 particular item on May 7th, 1981.

25 Q (By Mr. Sinkin) Well, since you've used the

1 word generally, are there particular items that you read  
2 here that had not come to your attention as of May 7th,  
3 1981, specific items in this description?

4 JUDGE BECHHOEFER: Are these the other items  
5 or items within A?

6 MR. SINKIN: Items within A.

7 A I meant by the word generally that I was aware  
8 of Brown & Root's approach to dealing with Regulatory  
9 Guide 175, which was what this was about, and some of  
10 the difficulties they were having with that. The  
11 details of electrical terminations and cable pulling and  
12 everything like that, I'm not an electrical engineer, so  
13 I wasn't familiar with those kind of details, but I was  
14 familiar with the overall situation.

15 Q (By Mr. Sinkin) There was a Nuclear  
16 Regulatory Commission regulatory guide that governed the  
17 situation described in item A and Brown & Root was  
18 having difficulty implementing the requirements of that  
19 regulation; is that what you were aware of?

20 MR. GUTTERMAN: Okay. That's an awful  
21 complex --

22 JUDGE BECHHOEFER: It's a guide.

23 MR. SINKIN: Excuse me?

24 JUDGE BECHHOEFER: It's not a regulation, it's  
25 a guide.

1 Q (By Mr. Sinkin) Guide.

2 A There was a Regulatory Guide No. 175 that came  
3 out in I believe 1974 or thereabouts that had to do  
4 with, among other things, electrical separation and what  
5 the NRC requirements were going to be. And Brown &  
6 Root, as with every other architect engineer in the  
7 country, had to take those general words and come up  
8 with a design that they were going to implement and  
9 that's what this particular item addresses.

10 Q This item says that Brown & Root never  
11 completed the design and never implemented either  
12 requirement satisfactorily.

13 As of May 7th, 1981, were you aware of Brown &  
14 Root having successfully completed the design or  
15 implemented the requirements of the regulatory guide  
16 satisfactorily?

17 A In 1981, my recollection is that Brown & Root  
18 had attempted an approach through '75, '76, '77 that  
19 they -- which would have met the regulatory guide which  
20 was physically extremely difficult to implement. There  
21 just wasn't enough space in the plant. In 1978 or '79,  
22 I'm not sure exactly what the year was, Brown & Root  
23 recognized this and modified their approach. And as of  
24 1981, they were still going about getting those details  
25 worked out.



1           So, they had not -- in answer to your  
2 question, they had not completed the design yet.

3           Q     And was it your view that the difficulties  
4 experienced by Brown & Root traced to Brown & Root's  
5 lack of nuclear experience?

6           A     I'm not sure if I can really answer what the  
7 cause of that was. This was a new regulatory guide. We  
8 had a three-train system which no other plant in the  
9 country had. And Brown & Root just trying to approach  
10 it that turned out not to be physically realistic to  
11 implement. I'm not sure what you could, from my  
12 personal technical viewpoint, pinpoint the cause of  
13 that.

14          Q     The three-train system being more complicated  
15 than a two-train system?

16          A     No, it just required that instead of having to  
17 separate two trains from each other, I had to separate  
18 three trains from each other.

19          Q     Turning to page 36, Dr. Sumpter, item C, if  
20 you would just review that for a moment.

21          A     Okay.

22          Q     Are you familiar with -- were you familiar on  
23 May 7th, 1981, with the failure of Brown & Root to  
24 update basic calculations on electrical loads that had  
25 resulted in undersized auxiliary transformers and other

1 transformers being installed in the plant?

2 A No. I'd heard -- I'm not sure if this problem  
3 had surfaced by then and I just -- I had heard about  
4 it. I'm not familiar with any of those details.

5 Q Item E on page 36, Brown & Root's inability to  
6 manage subcontractors in relationship to design and  
7 fabricating piping systems. Were you familiar on May  
8 7th, 1981 with the problem described in item E?

9 MR. GUTTERMAN: I'm searching this paragraph  
10 to find the safety-related implications of it, Mr.  
11 Chairman.

12 I see reference to overly conservative  
13 design.

14 MR. SINKIN: The safety-related implications  
15 will come in the causes, Mr. Gutterman.

16 MR. GUTTERMAN: No, I object on the grounds  
17 that it's got no nexus with the Quadrex issues in any  
18 safety-related sense.

19 Q (By Mr. Sinkin) Let me ask a foundation  
20 question then, Dr. Sumpter. Is the design and  
21 fabrication of piping systems a safety-related activity?

22 A If the piping system is a safety-related  
23 system, yes, it is.

24 Q Would you expect to find pipe whip restraints  
25 in non-safety-related systems?

1 Well, I think we can short circuit this.  
2 Since the last words of the item are in the reactor  
3 containment building, would piping systems in the  
4 reactor containment building be safety-related?

5 A Some would, yes.

6 Q Some would, some would not?

7 A There may be some that are not.

8 Q Ninety percent are?

9 A There is a considerable number that are, let's  
10 put it that way.

11 Q And it was Brown & Root's responsibility to  
12 manage and -- were there subcontractors who were  
13 installing safety-related piping in the reactor  
14 containment building, Dr. Sumpter?

15 MR. GUTTERMAN: Mr. Chairman, I'll object to  
16 that question because installation is clearly a  
17 construction-related activity.

18 MR. SINKIN: Well, but you can't get backwards  
19 to the management of it until you know whether it's  
20 happening.

21 Mr. Chairman, the objections are what's  
22 slowing this down. If I can get a couple of good  
23 questions in, I think we're there.

24 If you've got a problem with this example,  
25 we'll move on to the next one.

1 Q (By Mr. Sinkin) Let's try the HVAC examples,  
2 Dr. Sumpter, on page 37, item F. Are you familiar with  
3 that problem or were you familiar with that problem on  
4 May the 7th, 1981?

5 A I'm familiar with part of this, all these  
6 allegations.

7 Q Which part are you familiar with?

8 A The first paragraph -- primarily the first  
9 paragraph.

10 Q Is it your understanding that the cause of the  
11 failure to update basic calculations noted in the first  
12 paragraph resulted from the Brown & Root HVAC engineers  
13 failing to understand and comply with basic nuclear  
14 power plant design requirements?

15 A No, I don't believe there's a connection  
16 between those two sentences as far as cause and effect.

17 Q What in your view was the cause of Brown &  
18 Root's failure to update the basic calculations which  
19 resulted in what is characterized here at least as a  
20 serious design deficiency?

21 A I don't know really what the cause was.

22 Q Turning to item G on page 37, Dr. Sumpter.

23 JUDGE BECHHOEFER: Just a minute.

24 MR. SINKIN: Yes.

25 JUDGE BECHHOEFER: Could you answer one

1 further question on the HVAC system?

2 THE WITNESS: Yes, sir.

3 JUDGE BECHHOEFER: At what point in time had  
4 you become aware of whatever is described here in the  
5 first paragraph that you answered questions on?

6 THE WITNESS: Would you repeat that, please?

7 JUDGE BECHHOEFER: At what point in time did  
8 you become aware of the situation described in paragraph  
9 P, the portion of it to which you said you were  
10 familiar?

11 THE WITNESS: I was aware that the -- in March  
12 of 1980, HL&P had uncovered that the HVAC system in the  
13 rad waste control room which initially was a  
14 non-safety-related system should have been a  
15 safety-related system because Brown & Root had moved  
16 into that control room the safe shutdown panel. It  
17 wasn't originally there. And in the course of them  
18 laying out various panels, they had moved it into the  
19 rad waste control room and that panel was a  
20 safety-related panel and therefore the cooling system  
21 for that room needed to be safety-related. And that's  
22 the first time I was aware that we were having some  
23 problems with the HVAC system relative to what's in this  
24 first paragraph.

25 JUDGE BECHHOEFER: Do you happen to know



1 whether the matter that's referenced in the second and  
2 third paragraphs were at least in existence as of May  
3 '81 or did they arise later?

4 THE WITNESS: I don't know specifically. I  
5 was aware that Brown & Root had subcontracted out to  
6 Offshore Power Systems a total review of the HVAC  
7 system. And in March through May of 1981, Brown & Root  
8 indicated that they were making a number of changes to  
9 the system based on the comments that OPS was making.  
10 But we didn't get into any details as to what those  
11 specifics were, so I can't tell you if the second and  
12 third paragraphs were a part of that, what was going on  
13 in that time frame.

14 Q (By Mr. Sinkin) Dr. Sumpter, in March or '81  
15 you became aware that Brown & Root had moved a rad  
16 waste -- a safe shutdown panel you said into the rad  
17 waste control room; is that correct?

18 A In March of 1980.

19 Q In March of 1980, excuse me.

20 A Yes.

21 Q And the safe shutdown panel is itself a piece  
22 of safety class equipment?

23 A That's correct.

24 Q So, that changed the definition of the whole  
25 room because before there had been no safety class

1 equipment in it?

2 A Well, you don't call the room a safety-related  
3 room. That just necessitated that the cooling --

4 Q Well, the HVAC system in the room --

5 A Needed to be safety-related, that's correct.

6 Q -- needed to be safety-related.

7 In March of 1980, was a review begun to see if  
8 this was a potentially reportable item under 50.55(e)?

9 A I don't know about that.

10 Q Did you have any responsibility in March of  
11 1980 to see that such reviews be begun?

12 A No, that was the responsibility of the people  
13 on the project.

14 Q By people on the project, do you mean the  
15 people actually on site? How are you differentiating  
16 yourself from --

17 A The people who were at that time assigned to  
18 the project and for the most part from engineering in  
19 Brown & Root's offices on Clinton Drive.

20 Q Are you saying that it was Brown & Root's  
21 responsibility to initiate reviews of potentially  
22 reportable items under 50.55(e), but not HL&P's  
23 responsibility?

24 A No. If Brown & Root uncovered a situation  
25 they were, under obligation to notify HL&P because we

1 were the ones who would report under 50.55(e). And then  
2 we would conduct an investigation probably using or in  
3 concert with the Brown & Root people to determine its  
4 reportability.

5 Q Well, hypothetical. March 1980, you  
6 personally discover that Brown & Root has moved a safe  
7 shutdown panel into the rad waste control room and the  
8 HVAC system in that room is not classified  
9 safety-related. You realize it should be. Do you  
10 initiate a review to see if it should be reported or  
11 notified to the Nuclear Regulatory Commission under  
12 50.55(e)?

13 A At that time our procedure would require that  
14 I notify the chairman of the IRC of the situation I  
15 found and ask him to conduct a preliminary  
16 investigation.

17 Q And would that have been the same procedure in  
18 May of 1981?

19 A That's the procedure I was talking about, in  
20 May of 1981. That's the procedure --

21 Q Okay. Let the record be clear, my  
22 hypothetical had said March 1980 you walk in and see it.

23 A Oh, March 1980. I believe the procedure was  
24 the same in March of 1980.

25 Q Do you know if, in fact, in March of 1980

1 there was a notification to the Nuclear Regulatory  
2 Commission of a potentially reportable item under  
3 50.55(e) that covered the situation you described with  
4 the panel?

5 A Now do I know that or then?

6 Q Now do you know that?

7 A Now I know there was not.

8 Q In your view if you discovered that kind of a  
9 condition, a very similar condition today, would you  
10 initiate a review pursuant to 50.55(e)?

11 A Knowing the information necessary, that it was  
12 a deficiency and if it was released for construction and  
13 the lack of that safety-related cooling system could  
14 adversely affect the operation of the plant, yes, I  
15 would probably initiate a call to the IRC chairman.

16 Q What do you think in March of 1980 was the  
17 cause of Brown & Root failing to realize the HVAC system  
18 needed to be reclassified?

19 A I don't really know what the cause was. It  
20 could have been -- well, there's various possibilities.  
21 I don't know what the cause really was.

22 Q I believe you said that it was in 1978 that  
23 the matrix organization was first put in place; is that  
24 correct?

25 A Whenever HL&P moved over to Brown & Root's

1 office, we also made organizational changes relative to  
2 setting up a matrixed management system, and I believe  
3 that was in 1978.

4 Q And from that time forward, your level of  
5 involvement directly in the South Texas Nuclear Project  
6 was less than it had been before?

7 A Yes. My interaction and day to day knowledge  
8 of activities going on on the project was less.

9 Q Turning to item G, page 37, the isolation  
10 valve cubicle item.

11 Have you familiarized yourself?

12 A On, okay.

13 Q Just please famaliarize yourself for the  
14 moment.

15 Are you ready?

16 A One minute.

17 Okay.

18 Q You've read item G--

19 A Yes.

20 Q -- the isolation valve cubicle problem.

21 Are you aware of the problem that's described  
22 in this item for the isolation valve cubicle on May 7th,  
23 1981?

24 A Yes, I was.

25 Q Did you attribute the problem of Brown &



1 Root's failure to properly understand and consider  
2 regulatory requirements?

3 A I'm not sure what the people that wrote this  
4 meant by that.

5 Q I'm really asking for your understanding as  
6 opposed to your understanding of what they might have  
7 meant.

8 A Oh, okay. The problem was that Brown & Root  
9 began to design a restraint for the piping going through  
10 the IVC. We at HL&P did not feel that that was a  
11 physically possible design, if you will. It was going  
12 to be very huge, large. And we talked to some  
13 consultants who indicated that they felt similar to we  
14 did, Brown & Root was having difficulty completing the  
15 design and that was the kind of problem. We eventually  
16 worked out a contract with another consultant who was an  
17 expert in pipe restraint design and they started to  
18 design this.

19 That was the problem. I don't know what the  
20 cause was.

21 Q HL&P went out and hired somebody else to do  
22 this work rather than have Brown & Root subcontract?

23 A Well, in agreement with Brown & Root --

24 Q In agreement with Brown & Root.

25 A Brown & Root and we agreed to go get another

1 party to look at this.

2 Q Item H -- let's skip item H. Let's go to item  
3 N on page 39.

4 A Okay.

5 Q Were you aware on May 7th, 1981, of the  
6 problem described in item N, Dr. Sumpter?

7 A No, I don't know if that problem had surfaced  
8 at that time.

9 Q Moving to the second item N, apparently  
10 there's a typographical error, the second item N is beam  
11 to column. If you would review that.

12 A Okay.

13 Q Were you aware of the thermal loads problem  
14 that was affecting the design of structural steel in the  
15 reactor containment building. As of May 7th, 1981, were  
16 you aware of that?

17 A Yes.

18 Q Did this failure by Brown & Root to consider  
19 thermal loads represent in your mind a weakness in Brown  
20 & Root's design verification?

21 A What happened in this particular problem was  
22 that the structural engineer took a temperature that had  
23 been generated by the nuclear analysis group and in the  
24 load calculation where he was summing up the loads,  
25 instead of putting the temperature in that nuclear

1 analysis group put in, he zeroed it out, put T equal  
2 zero in the calculation. He felt he had a technically  
3 justifiable reason for doing that.

4 As it turned out, that resulted in these  
5 components being overstressed. That calculation was  
6 checked by Brown & Root, and checking in Brown & Root  
7 was a fairly rigorous process.

8 That may or may not have indicated a weakness  
9 in the design verification. It was an isolated  
10 incident. I'm not sure what you can attribute the cause  
11 of that to.

12 Q Before that zeroing out of the thermal load  
13 should have had any impact on the actual installation,  
14 should there have been a verification of his decision to  
15 zero out that load?

16 A There was.

17 Q There was? And did the verifier catch the  
18 fact that he had zeroed it out, but that was the wrong  
19 decision?

20 A The calculation I looked at personally during  
21 the Quadrex review -- you have to understand, Brown &  
22 Root did a number of what I would call preliminary  
23 checks. Every calculation they did was checked. They  
24 didn't take preliminary data and do a calculation and  
25 just send it out with no one looking automatic it.

1 Per their procedure, the checking process was  
2 almost as rigorous as, if you will, design verification  
3 per Appendix B. It had all the attributes. They then  
4 had another person do what they called a preliminary  
5 verification. And their plan was anytime they went back  
6 to a calculation, it would be checked and verified  
7 again, even before they got to the final verification.

8 So, they were doing a number of verifications  
9 in there and in this particular one the verifier agreed  
10 with the decision to zero out the temperature. He had  
11 signed the calculation.

12 Q And the person who did the I think you called  
13 it preliminary review? There's like a third person in  
14 the chain.

15 A There was a checker and then a verifier.

16 Q Preliminary verification.

17 A Preliminary, yes.

18 Q Okay. Did the -- person one does it, zeroes  
19 it out. Person two, the checker, did the checker agree  
20 it should be zeroed out?

21 A Yes.

22 Q And then comes the verification and the  
23 verifier agreed that it should be zeroed out?

24 A Yes.

25 Q The result is a design in the field in which

1 there was too much stress in the beam to column  
2 connection?

3 A Yes.

4 I did not meet -- neither Quadrex nor I met  
5 with the individuals to determine why they felt it was  
6 technically justifiable to zero that temperature out.  
7 We did not pursue that.

8 Q You did not actually meet with those --

9 A No, we did not ask the individual why did you  
10 make this temperature zero.

11 Q Did the fact that three people in the chain of  
12 this design would approve something that results in  
13 excessive stress in the design raise a question in your  
14 mind about the competence of the people that were  
15 performing that task?

16 A Not necessarily. I'm not a structural  
17 engineer. They may have had a very logical, sound  
18 technical reason for doing that.

19 Q Item N, the second N, indicates that this was  
20 a problem which Brown & Root could not solve prior to  
21 being terminated as architect engineer. Is it a problem  
22 that they could not solve what to do about the  
23 overstressed beam to column connections, is that the  
24 problem that was not solved?

25 MR. GUTTERMAN: I'll object to the question if



1 the implication of it is to ask a witness what the  
2 document means. He already testified he didn't  
3 participate in its drafting, he doesn't know exactly --

4 MR. SINKIN: All right.

5 Q (By Mr. Sinkin) Prior to leaving the project,  
6 was Brown & Root able to resolve the overstressed beam  
7 to column connections?

8 A I believe that the final report -- this was  
9 reported to the NRC and I believe the final report had  
10 not yet been turned in and approved by the NRC when  
11 Brown & Root was terminated.

12 MR. SINKIN: Mr. Chairman, CCANP Exhibit 92  
13 was marked for identification. I would like it to just  
14 travel with the record to illustrate what the witness  
15 and I were addressing since we didn't often read the  
16 item into the record.

17 MR. GUTTERMAN: I don't think there's any  
18 ruling necessary for that, Mr. Chairman.

19 JUDGE BECHHOEFER: That's correct.

20 MR. GUTTERMAN: Could I suggest this might be  
21 an appropriate time for a break?

22 MR. SINKIN: Sure. That's fine.

23 JUDGE BECHHOEFER: Are you at a breaking  
24 point?

25 MR. SINKIN: Yes.

1 JUDGE SHON: I think we all are.

2 JUDGE BECHHOEFER: This one will be a few  
3 minutes, like -- well, I usually say fifteen. It may be  
4 a couple of minutes longer than that.

5 (Recess.)

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1 JUDGE BECHHOEFER: Back on the record.

2 Q (By Mr. Sinkin) Dr. Sumpter, I want to return  
3 for just a moment to the problem we discussed in the  
4 classification of the HVAC in the rad waste control room  
5 after the safety shutdown panel was moved in. March of  
6 1980, you became aware of that problem. Is that correct?

7 A No, I became aware of that problem sometime  
8 after that in 1980, I'm not sure when.

9 Q But prior to May 7, 1981?

10 A Prior to May 7, that's correct.

11 Q As you understand that problem, should a review  
12 have been instituted to determine whether it was  
13 potentially reportable under 50.55(e)?

14 A At what time frame?

15 Q Well, as you understand the problem now that  
16 was discovered in March of 1980, in March of 1980, should  
17 a review have been initiated to determine whether a  
18 potentially reportable finding existed?

19 A Yes, I believe so.

20 Q Moving forward in time -- let me make it  
21 hypothetical so we don't have to worry about whether you  
22 actually did it.

23 Let's say that in March of 1980, there was  
24 something where a review of potentially reportability  
25 should have begun and didn't. And in November of 1980,

1 you find out about both the deficiency and the fact that  
2 no review has been begun for potential reportability.

3 First of all, I assume you would begin that  
4 review for potential reportability; is that correct?

5 A I would have noticed -- let's see, in November  
6 of '81?

7 Q No, no, no, wait. I see the date does matter  
8 to you. November of '80, I'm trying to stay within that  
9 time frame.

10 A I was just trying to pin the date down relative  
11 to who I would notify to begin the review in the  
12 procedure, that's all. That's the only thing the date  
13 means.

14 Q Let's say November 1980 for the sake of the  
15 hypothetical, you find out that the review hasn't been  
16 begun, you decide it should be done; do you notify the  
17 chairman of the Incident Review Committee to begin that  
18 review?

19 A I would call the chairman of the Incident  
20 Review Committee.

21 Q The fact that a review was not begun in March,  
22 is that, in your view, a separate item which might  
23 produce a notification?

24 In other words, for some reason, something  
25 where a review of potential reportability should have

1 been was not done in a timely fashion, is that another  
2 item -- let me call to your -- to your attention 50.55(e)  
3 and we'll take a look at that for just a moment. That  
4 might help.

5 We have my definition in the hypothetical, we  
6 have a deficiency that is safety related which, if not  
7 corrected, could affect the ultimate safety of the plant.  
8 We've satisfied all those preliminary requirements in  
9 50.55(e) and we're now down at section lii -- iii.

10 Are you following me?

11 A Yes.

12 Q Okay. If you discovered that a review for  
13 potential reportability should have begun but was not  
14 begun within a timely -- in a timely fashion, would that  
15 constitute in your view something that would fall under  
16 50.55(e) lii, a significant deficiency -- I'm sorry, a  
17 single -- a significant breakdown in any portion of the  
18 quality assurance program?

19 MR. GUTTERMAN: I will object to that. This is  
20 a hypothetical that's just got no direct relationship to  
21 any of the findings we're litigating. There's no finding  
22 about the need to report failures to report; all of the  
23 Quadrex issues were related to questions of design, not  
24 questions of following reporting responsibilities to the  
25 NRC.



1 MR. SINKIN: We're testing the current  
2 competence of the witness, so why don't we set it as of  
3 today and then we can avoid the objection.

4 MR. REIS: It's just too tangential to any of  
5 the issues in the case to have any meaning. We're just  
6 spinning wheels and going around wasting time.

7 MR. GUTTERMAN: And I can't see any reason why  
8 we would be testing the current competence of Dr. Sumpter  
9 when he doesn't have any current responsibilities to  
10 perform this kind of activity.

11 MR. SINKIN: That's why I picked November of  
12 1980 in the first place when he did have  
13 responsibilities, but we can try that.

14 JUDGE BECHHOEFER: The Board will sustain the  
15 objection, but on the basis that the situation described  
16 as a matter of law could not in itself constitute a  
17 significant breakdown. I think the question could not  
18 receive a meaningful answer. We recognize the problems  
19 about expertise currently and early as well. Dr. Sumpter  
20 has no responsibility today for that, for 50.55(e).

21 MR. SINKIN: I set the example in November of --

22 JUDGE BECHHOEFER: I realize.

23 MR. SINKIN: -- November of 1980 when he did  
24 have responsibilities and that was the one of the  
25 aspects.

1 JUDGE BECHHOEFER: But the example you posed  
2 does not constitute a significant breakdown.

3 MR. SINKIN: I am concerned that you have made  
4 a ruling of law before we've had any chance to respond to  
5 it as a matter of law.

6 JUDGE BECHHOEFER: Single failure to respond,  
7 failure to report something would not, in our view,  
8 constitute a significant breakdown. A single failure to --

9 MR. SINKIN: I guess what disturbs me is your  
10 saying that if Brown & Root discovers a significant  
11 deficiency in design which if not corrected would produce  
12 a potential safety impact and they do not communicate to  
13 Houston Lighting & Power that they have found such a  
14 design so that a review can be initiated pursuant to  
15 50.55(e), or they do not, themselves, initiate a review,  
16 then that does not constitute a significant breakdown in  
17 quality assurance. I'm not --

18 JUDGE BECHHOEFER: A separate violation, not  
19 the original situation that you described. The failure  
20 to report it once.

21 MR. SINKIN: You are saying that the failure to  
22 initiate a review, itself --

23 JUDGE BECHHOEFER: A review of the failure to  
24 report, which is what your question said.

25 MR. SINKIN: Yes.

1 JUDGE BECHHOEFER: That would not be a  
2 significant breakdown.

3 MR. SINKIN: Well, I'm sorry, the way you just  
4 said it is different. There seems to me there's three  
5 things.

6 MR. REIS: Mr. Chairman, we've gone on a while.

7 JUDGE BECHHOEFER: We have ruled.

8 MR. REIS: Re-argument of the ruling of the  
9 Board.

10 MR. SINKIN: It's a ruling of the Board on a  
11 matter of law which will effect what findings we file. I  
12 think we're entitled to understand clearly what the  
13 ruling of law is because we've talked about three  
14 different motions.

15 One is you find the deficiency and you don't  
16 initiate -- you find the deficiency and you don't  
17 initiate a review of 50.55(e); the second is you discover  
18 months later that no review was begun.

19 JUDGE BECHHOEFER: We have ruled and I think in  
20 the context of your question, we've ruled. And I don't  
21 want to try to rule on every hypothetical you can dream  
22 up at this stage.

23 MR. SINKIN: I'm just trying to understand  
24 which one you ruled on, that's all, which one it is that  
25 you were ruling, that's all I was trying to understand.

1 And perhaps the record will enlighten me on that.

2 Q (By Mr. Sinkin) In your testimony at Page 3,  
3 line 10, Dr. Sumpter, you state that you had managerial  
4 responsibility for HL&P's reporting of design  
5 deficiencies, from February 1975 until March 1981. Could  
6 you give me little detail on what your managerial  
7 responsibilities were in that context?

8 A I was responsible, and the responsibility  
9 varied as the character of the project changed, for up  
10 and to the -- on South Texas, up until the matrixing  
11 organizational change, for calling in to the NRC any  
12 reportable deficiencies that were design related.

13 After we matrixed on South Texas, that  
14 responsibility shifted as far as calling in and making  
15 the reportability determination on those activities, to  
16 the project, licensing personnel and the project manager.

17 On the Allen's Creek Project, I still had that  
18 primary responsibility.

19 Q After the matrixing?

20 A Well, throughout until the project was  
21 terminated.

22 Q Okay. You said that before matrixing on South  
23 Texas, you had responsibilities for calling in to the NRC  
24 any potentially reportable deficiency. Was that the  
25 extent of your responsibility, you made the call, or were

1 you serving in some evaluation capacity as to whether in  
2 fact such a call should be made?

3 A You didn't -- you didn't exactly characterize  
4 what I said. I had responsibilities for making the  
5 reportability determination and calling it in, up until,  
6 on South Texas at least, up until the project was  
7 matrixed and those were only for design -- essentially  
8 home office design related deficiencies, not deficiencies  
9 at the site or uncovered at the site.

10 Q Even if those deficiencies were design related?

11 A Even if those were design related. That was  
12 handled by the QA manager.

13 Q In the change that took place in the matrixing  
14 in 1978, remained in place until as of March of 1981, you  
15 had not -- excuse me. Between 1978 when it was matrixed  
16 and March of 1918, did you not have any responsibilities  
17 for 50.55(e) reporting at the South Texas Project?

18 A In the context of evaluating deficiencies and  
19 calling the NRC, no.

20 Q You list, starting at line 12 on Page 3, three  
21 activities that were part of your responsibility. The  
22 first is development of HL&P and Brown & Root reporting  
23 procedures. After the matrixing, did you still have that  
24 responsibility for South Texas?

25 A No. Those procedures were -- no, after '78,



1 no. I did not have direct managerial responsibility for  
2 development of those procedures.

3 Q How about the sponsoring of training seminars  
4 for HL&P personnel?

5 A I think through my Licensing Department, I made  
6 sure that those training seminars -- the requirement that  
7 HL&P personnel reviewing safety related work have  
8 received appropriate training. I made sure that my  
9 licensing people assigned to the project accomplished  
10 that function, accomplished that task.

11 Q Your licensing people provided the training?

12 A Yes.

13 Q And you made sure that they did it?

14 A I made -- I reviewed the training program and  
15 made sure that the requirement was instituted and that  
16 that training was carried out.

17 Q And what about -- well, I think you've answered  
18 the third part, the evaluation of design matters for  
19 reportability after matrixing, you didn't have any  
20 responsibility that you -- after matrixing, did you still  
21 review Brown & Root system design descriptions for the  
22 South Texas Nuclear Project?

23 I'm looking at that time bottom of Page 3.

24 A I had managerial responsibility for the  
25 engineers who reported to me in the areas that they were

1 responsible for, to see that those functions were  
2 accomplished.

3 Q The same would be true for specifications?

4 A Yes. All those items, the engineers who were  
5 in my department who worked on the South Texas project,  
6 performed those functions.

7 Q As part of your responsibilities, did you  
8 review the quality assurance audits of Brown & Root  
9 engineering conducted by HL&P?

10 A No, I did not.

11 By that I mean I did not review the audited  
12 reports on a routine basis the Quality Assurance  
13 Department either within HL&P or Brown & Root generated.

14 Q Occasionally a report would be brought to your  
15 attention?

16 A If there was a QA audit that uncovered some  
17 matters that had to do specifically with technical items  
18 in engineering, they may bring that to my attention --  
19 may have brought that to my attention.

20 Q Do you remember a Brown & Root -- an HL&P  
21 quality assurance audit of Brown & Root that focused on  
22 ALARA requirements in the '79, '80 period, being brought  
23 to your attention at that time?

24 A This was an audit conducted by --

25 Q HL&P of Brown & Root design engineering. The

1 problem focused on is ALARA

2 A I'm trying to think. I can't recall one way or  
3 the other whether an audit was done of ALARA in that time  
4 frame. Right now, I can't remember.

5 Q During the course of the Quadrex review, prior  
6 to the completion of the Quadrex review, was a concern  
7 about Brown & Root's ALARA work brought to your  
8 attention?

9 A Yes.

10 Q By whom?

11 A Mr. Standley of the Quadrex Corporation.

12 MR. SINKIN: Mr. Chairman, I'm going to give  
13 the court reporter three copies of what is Applicants'  
14 Exhibit 65. Since everyone else has Applicants' Exhibit  
15 65, we only have three copies if that's all right.

16 MR. REIS: What is it?

17 MR. SINKIN: It is a letter dated March the  
18 16th, 1981 of two pages, from Mr. Lawrence Stanley to Dr.  
19 J.R. Sumpter.

20 MR. SINKIN: Mr. Chairman, I recognize it's our  
21 exhibit and we have it, but just don't have it right in  
22 front of me.

23 MR. REIS: I don't have it either.

24 MR. SINKIN: Well, perhaps for the --

25 JUDGE BECHHOEFER: Can you refer me to a number

1 just off the record?

2 (Discussion off the record.)

3 JUDGE BECHHOEFER: I guess we can go on the  
4 record.

5 MR. SINKIN: Let me do this, Mr. Chairman. I  
6 will give you my copy to see if it becomes necessary.

7 Q (By Mr. Sinkin) Dr. Sumpter, if you would take  
8 a moment to review that letter.

9 MR. SINKIN: For the record, Applicants'  
10 Exhibit 65 has not yet been marked for identification.  
11 The designation of Applicant Exhibit 65 comes from their  
12 letter sent out with their testimony that this would be  
13 Applicant 65 and Applicants have expressed their intent  
14 to introduce it. So I won't change any markings and we  
15 won't introduce it at this time.

16 I'm simply going have to Dr. Sumpter identify  
17 it and ask a couple of questions about it.

18 Q (By Mr. Sinkin) Have you reviewed that, Dr.  
19 Sumpter?

20 A Yes, I have.

21 Q Do you recognize this as a letter that Dr.  
22 Stanley sent to you on March the 16th to inform you about  
23 his views of the Brown & Root ALARA program?

24 A Yes, I do.

25 Q At that time, did you initiate any review to

1 see if the findings of Dr. Sumpter were potentially  
2 reportable findings pursuant to 50.55(e)?

3 A You mean Mr. Stanley's?

4 Q Mr. Stanley.

5 A No, I did not.

6 MR. SINKIN: I'm going to distribute what I  
7 would ask be marked as CCANP 93 and ask you to review  
8 this letter, Dr. Sumpter.

9 (CCANP Exhibit 93 marked  
10 for identification.)

11 THE WITNESS: I'm finished.

12 Q (By Mr. Sinkin) Do you recognize this letter,  
13 Dr. Sumpter?

14 A I vaguely recall this response back from Brown  
15 & Root.

16 Q On the second page in the list of people who  
17 are copied, there's a "J.R. Sumpter," parentheses,  
18 "(HL&P,)" close parentheses; is that you?

19 A Yes, that's me.

20 Q In your recollection -- well, in the first  
21 paragraph of the Brown & Root letter, CCANP 93, Mr.  
22 Hawks, who wrote the letter, refers to a March 16th, 1981  
23 meeting between HL&P and Brown & Root, where a letter  
24 containing preliminary findings of the engineering review  
25 of Brown & Root was presented. Is it your recollection



1 that such a meeting was held?

2 A Yes.

3 Q Were you in attendance?

4 A Yes, I was.

5 Q Was the letter referred to the letter from Dr.  
6 Stanley -- from Mr. Stanley to you?

7 A Yes, I believe it was.

8 Q And the March 20th letter, CCANP 93, is a  
9 follow-up to that meeting from Mr. Hawks telling what  
10 Brown & Root intends to respond to the Stanley letter,  
11 the concerns of the Stanley letter?

12 A Letter of March 20th is a confirmation of the  
13 agreements that were reached at that meeting, and the  
14 meeting was really a culmination of a number of events  
15 that started long before Quadrex arrived on the scene.

16 Q The ALARA problem was a long standing problem;  
17 there were difficulties with Brown & Root's ALARA  
18 analysis?

19 A No, I wouldn't classify it as ALARA problem.  
20 I'm talking about the whole ALARA concept from a  
21 management, from HL&P's management viewpoint.

22 Once the NRC repertory guide 8.8 came out in  
23 probably 1973, '74, HL&P, over the seven or eight years  
24 up until this date, developed a number of approaches to  
25 deal with ALARA.

1           And we interfaced with all our various  
2 contractors to let our -- to explore how they were going  
3 to deal with this and let our views be known. And the  
4 approaches to ALARA were changing and improving over the  
5 years. And at this point in time, we had some things we  
6 would like Brown & Root to do, and the meeting, the  
7 meeting this letter talks about was the meeting where  
8 Brown & Root agreed to do those things.

9           Q     Did Dr. Stanley's letter of March the 16th  
10 indicate to you that the Brown & Root was not doing the  
11 things that you had expected they would have been doing?

12          A     Yes. At this point in time, we had developed I  
13 guess what's referred to in Dr. Stanley's letter as  
14 guidelines, documented guidelines, on how to conduct  
15 ALARA reviews.

16               We had also developed a videotaped training  
17 program, went along with that manual. This was the first  
18 one developed in this industry, no one had done it  
19 before. And we asked Westinghouse, General Electric,  
20 EBASCO, and Brown & Root, to implement that program in  
21 their procedures.

22               At this point in time, we had, of course,  
23 whenever you go out to a contractor and say, "I've got a  
24 program I'd like you to implement," you get reactions  
25 from all the way from, "Gee, that's a great idea," to "I

1 don't agree with you."

2 So you have to explain your view and where you  
3 are coming from and why you think this would help improve  
4 things, and at this point in time, I believe we were, me  
5 and my Health Physics Department, were perhaps frustrated  
6 that Brown & Root was slower in agreeing to adopt this  
7 than we would have liked.

8 We were being very aggressive and pushing very  
9 hard. And Quadrex was made aware of this, and agreed,  
10 this is the only time this happened during the middle of  
11 the review, because both Brown & Root and us were almost  
12 at the point of agreement where HL&P's staff of health  
13 physics were essentially working hand-in-hand with Brown  
14 & Root's health physicists and jointly conduct a  
15 re-review, primarily because the plant design had been  
16 changing a lot and the early ALARA needed to be updated.

17 And so we were about ready to go and Mr.  
18 Stanley agreed to send this letter as he willed a final  
19 push and we sat down with Brown & Root in the middle of  
20 March and they agreed to all these points in here and we  
21 were ready to go.

22 Q Did Dr. Stanley do any independent analysis on  
23 ALARA before writing this letter or was he taking the  
24 information you were providing him in order to write the  
25 letter?

1           A     Quadrex did look at the plant design from an  
2     ALARA viewpoint. The points of this program that he put  
3     in his letter we were in agreement with. I don't know if  
4     he -- if we thought them or brought those to all of those  
5     to the -- to his attention ourselves and he agreed with  
6     them or there was some combination of the two.

7                     But I had seen and agreed to this letter before  
8     he sent it.

9           Q     Were there other occasions during the Quadrex  
10    review when you requested or discussed with Mr. Stanley  
11    sending such a letter, a letter designed to provoke  
12    action on the part Brown & Root?

13          A     No, there were no other occasions.

14                     MR. SINKIN: Mr. Chairman, I would move CCANP  
15    93 into evidence.

16                     MR. PIRFO: Staff has no objection.

17                     MR. GUTTERMAN: No objections.

18                     (CCANP Exhibit 93 admitted  
19    into evidence.)

20          Q     (By Mr. Sinkin) In your testimony at Page 4,  
21    line 21, Dr. Sumpter, you say that Mr. Goldberg told you  
22    that he desired an independent evaluation of STP  
23    engineering. What was the purpose of this evaluation as  
24    expressed to you by Mr. Goldberg?

25          A     He indicated to me that he was new to the

1 company, he had talked -- his month or so being there, to  
2 a number of our people, and some Brown & Root people, and  
3 he wanted really an independent look at the status of  
4 engineering, where we were; that was point one.

5 Point two was, he wanted to get an idea of how  
6 Brown & Root was dealing with what he termed the unique  
7 nuclear issues. How they were handling those. So give  
8 him at least some feel for what the project, how well the  
9 project was doing from the engineering, technical  
10 engineering side primarily.

11 Q Originally, this review was fairly short in its --  
12 as envisioned in its duration, wasn't it? I mean what  
13 was the original concept of how long this review would  
14 take?

15 A He initially indicated, I think the words were  
16 two to three week review. That's all he said in our  
17 initial discussions.

18 And after I met with Quadrex, we started  
19 exploring how we'd go about this review. I just  
20 indicated to Mr. Goldberg that we were going to need some  
21 time to prepare the questions, some time to get the  
22 review to Brown & Root and then some time for Brown &  
23 Root to answer them and then to interface with them.

24 We never did go back to what he really meant by  
25 the two to three weeks, you know, whether the March



1 review time was a two to three weeks or not. But we  
2 ended up with the program we did.

3 (No Hiatus.)  
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1 Q Once the program was dropped, did you discuss  
2 with Mr. Goldberg that it was going to take longer than  
3 two to three weeks just by its very nature?

4 A No, I just outlined to him what we were going  
5 to do and he gave us the go ahead.

6 Q In your discussions of initiating this review,  
7 did Mr. Goldberg mention the fact that in May of 1981 he  
8 would be called upon to testify before the Atomic Safety  
9 and Licensing Board and that was one of the reasons he  
10 wanted to do this study in order to prepare himself for  
11 that?

12 A He indicated to me that he needed to know the  
13 status of engineering in case he was asked by either the  
14 other owners, perhaps by the NRC. He needed to have  
15 some feel because construction -- I guess the status of  
16 construction was well known, how everything was going  
17 on, and he felt for his future activities that he needed  
18 to know that. He did not specifically say that I need  
19 to know this for the ASLB, he just was fairly general  
20 about it.

21 Q Prior to Mr. Goldberg approaching you about  
22 the Quadrex evaluation, did you and Mr. Goldberg discuss  
23 Brown & Root's engineering and design program on a  
24 regular basis?

25 A When Mr. Goldberg first got there, we

1 discussed all sorts of subjects, personnel in both HL&P  
2 and within Brown & Root, my view of the status of  
3 engineering, if you will. So, there was a number of  
4 subjects that we were discussing, you know, fairly  
5 frequently.

6 Q Did you during those discussions identify to  
7 Mr. Goldberg potential weaknesses in Brown & Root's  
8 nuclear analysis capability?

9 A Yes. He asked me for examples of areas that I  
10 thought Brown & Root needed improvement and one of those  
11 areas that I was familiar with was nuclear analysis.

12 Q In the area of nuclear analysis, we'll use  
13 your phrase, where did Brown & Root need improvement  
14 that you communicated to Mr. Goldberg?

15 A In the early stages of the project, NUS did  
16 all the nuclear analysis. After we got the construction  
17 permit, Brown & Root indicated to me they wanted to  
18 develop the capability to do this analysis themselves.

19 From '76, '77 into '78, they attempted to get  
20 the computer codes in and up and running. It became  
21 apparent to us that they were not being successful in  
22 this effort and that the analysis was not getting done  
23 and they did not appear to be in a position to do it.

24 And that was the context of my remarks to Mr.  
25 Goldberg that the area was weak, that they just had not

1 yet developed a capability to do that. It's not an easy  
2 job.

3 Q I understand.

4 Were there any other areas besides the  
5 development of computer codes that you perceived the  
6 Brown & Root design and engineering process to be weak  
7 in that you communicated in turn to Mr. Goldberg?

8 A Well, I wouldn't characterize the weakness in  
9 nuclear analysis as a weakness in the design and  
10 engineering process. That's just a weakness in a  
11 particular group not being able to accomplish the  
12 function that they had wanted to do.

13 I identified to them that we had concerns in  
14 the HVAC area again relative to their ability to produce  
15 a design. There had been a lot of changeover of heads  
16 of that department, more than we thought were  
17 reasonable.

18 In the area of pipe being stress analyzed,  
19 inside containment had been subcontracted to EDS. We  
20 were not pleased with the management of that contract.

21 Or I think overall I indicated to them that I  
22 thought that compared to other architect engineers I was  
23 familiar with, that Brown & Root had some good people,  
24 but in general their overall level of experience was not  
25 as strong as we would like it to be.

1 Q Did you offer him any observations about the  
2 level of resources they were bringing to the job, the  
3 number of people they had doing it?

4 A Since Mr. Saltarelli arrived on the job, which  
5 I believe was March '80, he -- and this was not direct  
6 knowledge I had, this was knowledge I obtained from my  
7 people who were on the project, he had started to bring  
8 in some fairly experienced people into some key  
9 management positions. And I conveyed that information  
10 to Mr. Goldberg also.

11 Q Was it your view as of May the 7th, 1981, that  
12 Brown & Root's design and engineering program was  
13 adequately staffed in terms of numbers first?

14 A Oh, they had quite a few people. It's hard to  
15 judge -- the question really is is there an adequate  
16 staff of adequate experience to get the job done on  
17 schedule. And if one guy takes 800 people and can get  
18 it done and another person takes 700 or 600 people, I  
19 think the real question is is the job being performed on  
20 schedule.

21 Q As of May 7th, 1981, was the job being  
22 performed on schedule?

23 A No, the engineering was not meeting  
24 construction needs.

25 Q Was engineering significantly lagging behind



1     what you would have expected them to be producing?

2             A     Yes. I look at that from two viewpoints.

3     One, I was aware, though I was not in the construction  
4     department or the project management department who was  
5     monitoring schedules, that construction was not very  
6     much ahead of engineering as far as receiving drawings  
7     from engineering and immediately then going to the field  
8     with those, you know, not very much later.

9             And then, two, from going to the plant you  
10    could see that all the structures were up, but there was  
11    very little inside as far as components, HVAC, cable  
12    trays, that sort of thing. So -- and they were leaving  
13    a number of blockouts in the construction so that these  
14    components could be brought in and that indicated to me  
15    that the hardware engineering, if you will, was behind  
16    where it ought to have been to do things more  
17    efficiently.

18            Q     Is there any safety implication in your mind  
19    to having construction so close to engineering?

20            A     Generally, no. If construction doesn't have a  
21    drawing, then it doesn't build anything.

22            Q     Were the HL&P engineers that were in direct  
23    contact -- were there HL&P engineers in direct contact  
24    with Brown & Root engineers that were reporting to you?

25            A     Yes.

1 Q Were those engineers concerned in any way that  
2 there was excessive pressure on Brown & Root engineers  
3 to produce because construction and engineering were so  
4 close?

5 MR. GUTTERMAN: I assume the question is  
6 really did they tell Dr. Sumpter they were concerned  
7 rather than --

8 MR. SINKIN: Did they indicate to Dr. Sumpter  
9 that they were concerned.

10 A They did not communicate to me that there was  
11 a problem in Brown & Root as far as their ability to  
12 produce a quality product because of pressure, if you  
13 will, because construction needed some. As far as I was  
14 aware of, Brown & Root had a set of procedures and they  
15 were following them as far as producing whatever they  
16 had to produce.

17 Q (By Mr. Sinkin) Was Brown & Root having  
18 difficulty producing those procedures in either a --  
19 let's start with a timely fashion. Were they producing  
20 those procedures as needed to get work done?

21 MR. GUTTERMAN: Objection. I don't understand  
22 what "those procedures" means.

23 MR. SINKIN: The procedures he referred to in  
24 his previous answer.

25 MR. REIS: Mr. Chairman, I have another

1 thing. We're going a lot into time and scheduling and I  
2 don't think that's directly relevant to the issues that  
3 the Board is looking at. And, therefore, before you  
4 rule on that objection, I want to make it clear that the  
5 staff has an objection going to a different area and  
6 that's just these questions for the last -- I thought  
7 they might be preface to something. He has gone on  
8 about schedule and time and the Staff objects to this  
9 line of questioning.

10 MR. SINKIN: Well, first of all, Mr. Chairman,  
11 the assumption would have to be that schedule pressures  
12 don't create any quality problems. That was one of the  
13 questions I asked Dr. Sumpter about.

14 JUDGE SHON: He said no.

15 MR. SINKIN: He said no. But that's what I  
16 was looking for in this line of questioning and we got  
17 there.

18 JUDGE BECHHOEFER: It's continuing. Where are  
19 you going now?

20 MR. SINKIN: I'll withdraw the question and go  
21 to a different line.

22 Q (By Mr. Sinkin) In your testimony at page 4,  
23 line 22, you state that Mr. Goldberg -- that you  
24 discussed with Mr. Goldberg various areas he wished to  
25 be included in the evaluation. Were there areas that

1 you wished to be included in the evaluation, Dr.  
2 Sumpter?

3 A That Mr. Goldberg did not or --

4 JUDGE BECHHOEFER: I was going to ask you  
5 that. Is your -- additional areas or --

6 Q (By Mr. Sinkin) Well, additional to what Mr.  
7 Goldberg brought up, did you bring up other areas that  
8 you wanted included?

9 A Mr. Goldberg's initial instructions were those  
10 areas unique to nuclear. We then proceeded to have a  
11 dialogue as to what that meant. And, you know, we both  
12 had input to that particular dialogue. I can't recall  
13 if I suggested some and he said no or vice versa.

14 Q After the original group of areas were defined  
15 and you had begun the process, did you add any areas  
16 later?

17 A I think there originally were nine  
18 disciplines. First we decided after we listed all these  
19 unique nuclear areas to break them into disciplines.  
20 And the only area that was added, and that was at  
21 Quadrex' suggestion, was I believe in-service  
22 inspection, access, that type of area.

23 Q Access engineering?

24 A Access engineering.

25 Q And why did Quadrex bring up an area that HL&P

1 had not?

2 A I guess we -- I felt that that was going to be  
3 covered in the ALARA review because there were questions  
4 that dealt with that. Quadrex had, if you will, an  
5 expert in in-service inspection, access engineering.  
6 So, they felt since he was not the identified ALARA  
7 expert, that they would just make -- since Quadrex  
8 was -- for each discipline they had assigned individuals  
9 who were experts in those disciplines. They decided it  
10 would be most, I guess, expeditious to add one more  
11 discipline and then let this expert, you know, fit in  
12 and do that review.

13 Q Which potential contractors did you contact  
14 about conducting this review other than Quadrex?

15 A I did not contact any other contractors.

16 Q Did Mr. Goldberg contact any other  
17 contractors?

18 MR. PIRFO: Mr. Chairman, I realize this was  
19 raised in the direct testimony how Quadrex was selected,  
20 but I fail to see the relevance of where it's going.

21 MR. SINKIN: Well, it's going to the fact that  
22 in his testimony Dr. Sumpter says after consideration of  
23 a number of potential contractors, it was decided that  
24 Quadrex was the most appropriate contractor to perform  
25 the review. I was trying to determine whether any of



1 those other contractors were contacted and that's all I  
2 wanted to know.

3 MR. PIRFO: Is Quadrex -- well, that's the  
4 question. I mean, I keep asking for relevancy and he  
5 keeps telling me what the question is and telling me  
6 it's relevant to the question he asked previously. And  
7 I realize it's relevant to the question he asked by  
8 definition, but that's not an argument for relevancy to  
9 the issues in the case.

10 Now, is Quadrex' performance of the contract  
11 in issue? I don't understand that.

12 MR. SINKIN: Okay. I see.

13 MR. PIRFO: Has the question been withdrawn?

14 MR. SINKIN: I'll withdraw the question, Mr.  
15 Chairman.

16 Q (By Mr. Sinkin) Why did you find in your  
17 review with Mr. Goldberg that Quadrex was the most  
18 appropriate contractor to perform the review?

19 MR. REIS: I object --

20 MR. PIRFO: I'll object. That's the same  
21 question, Your Honor.

22 MR. SINKIN: No, it is not. The other  
23 question was whether they had contacted any other  
24 contractors. In his direct testimony he said that he  
25 decided that Quadrex was the most appropriate contractor

1 to perform the review and I'm asking why.

2 MR. PIRFO: Maybe it's a different question.  
3 The objection is relevancy.

4 MR. SINKIN: If it's irrelevant, maybe we  
5 should strike his testimony from the record and not  
6 bother to examine it.

7 MR. PIRFO: No objection.

8 MR. SINKIN: No objection to strike it?

9 MR. GUTTERMAN: That's not timely, Mr.  
10 Chairman. The testimony has been admitted now.

11 JUDGE BECHHOEFER: Well, the testimony can be  
12 stricken if it's shown to be not relevant.

13 MR. SINKIN: And it wasn't even a long line of  
14 questioning, Mr. Chairman. It was a sentence there, I  
15 wanted to know what the grounds were for the selection  
16 of Quadrex as being the most appropriate. That was the  
17 only question.

18 MR. PIRFO: If Mr. Sinkin is willing to make a  
19 proffer on this, you know, I'll consider withdrawing my  
20 previous objections and letting him go down this path as  
21 far as he wants. But I just don't see where it's -- it  
22 just seems to be taking up time and we're fishing here.  
23 For what, I don't know.

24 JUDGE BECHHOEFER: Well, do you think we  
25 should -- would the Staff suggest that we strike the

1 words "after consideration of a number of potential  
2 contractors?"

3 MR. PIRFO: No, I wouldn't portend to suggest  
4 we strike it. The Staff is not moving to strike it.  
5 Mr. Sinkin has said he suggested he would move to strike  
6 it. I would presume Applicants would object to that.  
7 If they don't, they don't.

8 I would say the Staff would not argue with a  
9 motion to strike it. That's all I meant to say on  
10 that. I wouldn't make any objection about striking it.  
11 It's not our testimony.

12 JUDGE BECHHOEFER: In my view, if it's in the  
13 direct testimony, you have to allow some  
14 cross-examination.

15 MR. PIRFO: I think we have done that, Mr.  
16 Chairman, with all due respect, and I think that it's  
17 gone far beyond the metes and bounds of reasonableness  
18 at this point.

19 MR. SINKIN: Well, what's actually been  
20 allowed, Mr. Chairman, is one question, did you contact  
21 anybody besides Quadrex. The answer was no. The next  
22 question was did Mr. Goldberg contact anyone.  
23 Objection. Withdrawn. And the third question was why  
24 did you say Quadrex was the most appropriate.  
25 Objection. Not answered.

1           So, we've had one question asked and answered,  
2 one question withdrawn and the third question objected  
3 to.

4           MR. REIS: Mr. Chairman, may I make an  
5 observation? We've had two and a half hours of  
6 questioning now on this witness and we haven't got a  
7 thing into the record that is worthwhile in any sense.  
8 I don't know -- if Mr. Sinkin can tell what substantive  
9 findings we can get from what we have in the last two  
10 and a half hours, i'd be very much surprised.

11           I don't think we're getting anywhere. We have  
12 had two and a half hours of fruitless  
13 cross-examination. And he's gotten answers. People  
14 have testified as to things. There have been questions  
15 going back and forth. But is there anything in  
16 anybody's mind that could go into findings that would be  
17 material or relevant to the issues in this case? And  
18 for the life of me, I can't think of anything that's  
19 happened in the last two and a half hours that is  
20 material or fruitful to moving this proceeding along.

21           MR. SINKIN: Well, Mr. Chairman, obviously Mr.  
22 Reis and I are not putting together the same case from  
23 either the overall perspective or from the overall  
24 findings. I don't expect us to have similar approaches,  
25 so I wouldn't expect him to perceive where I am going

1 with my case.

2           However, I think the questions I have been  
3 asking are perfectly legitimate questions that probably  
4 if we were on the first day we'd be moving along much  
5 smoother. But because it's late in the week and people  
6 are getting tired, my questions sound more tedious than  
7 they would sound on the first day.

8           However, I don't perceive my questions as  
9 being anything more than exploring the direct testimony  
10 to try and elicit information from the witness which I  
11 hope will be useful in the findings. If it turns out  
12 it's not, it's not.

13           But to take those three questions on that  
14 paragraph, they're just -- they call out to be asked.  
15 He says they considered a number of potential  
16 contractors. Did they contact any others? That's a  
17 logical question. And they decided Quadrex was the most  
18 appropriate. Why? That's a perfectly reasonable  
19 question.

20           I'm saying if this was the first day, we'd be  
21 doing fine.

22           MR. REIS: Mr. Chairman, Mr. Sinkin has no  
23 idea what cross-examination is. You try and frame your  
24 questions to go to the issues in this case. Just  
25 because I can ask questions on anything -- I could ask



1     what color shirt Mr. Goldberg was wearing that day, but  
2     that would be not material or relevant to this. Just  
3     because you see a set of direct testimony doesn't mean  
4     that you're allowed to cross-examine on it unless it  
5     goes to that. The fact that there's a sentence there  
6     doesn't mean you're allowed to cross-examine on it at  
7     all unless it is relevant and material.

8             MR. GUTTERMAN: I don't want my silence to  
9     indicate that the Applicants don't agree with the  
10    stuff. I have been sitting silent for, oh, an hour and  
11    a half or something like that because I wanted to give  
12    Mr. Sinkin a chance to cross-examine unhindered by  
13    interruptions. But I share the same concern the Staff  
14    has expressed that it hasn't gone anyplace, it hasn't  
15    accomplished anything. It's just kept us all sitting  
16    here listening to tedious conversation.

17            MR. SINKIN: It's certainly a view you're  
18    welcome to hold. And when I write my findings, we'll  
19    see whether I got anything that was useful. But I don't  
20    think that can be prejudged at this point.

21            MR. PIRFO: The Staff would simply renew its  
22    objections to the soliciting --

23            JUDGE BECHHOEFER: Pardon?

24            MR. PIRFO: The Staff would simply reiterate  
25    its objections to the relevancy of commissioning of

1 Quadrex and on --

2 MR. SINKIN: I'll rerespond directly to that  
3 point, Mr. Chairman.

4 There is more than one document available in  
5 this proceeding, though they are not necessarily in  
6 evidence yet, in which Mr. Goldberg expresses his  
7 opinions about whether the Quadrex report was  
8 satisfactory to him or not, expresses opinions about the  
9 Quadrex Corporation. Some are favorable, some are not  
10 so favorable. This is one way of establishing were they  
11 selected on the basis they were a well-qualified company  
12 and that after consideration of other companies that  
13 could have done the job that were also well-qualified,  
14 Quadrex was selected as the most qualified. That's the  
15 kind of information I was seeking with this question.

16 MR. PIRFO: That is not in issue. The issue  
17 is reportability of Quadrex of the various -- the  
18 reportability of Quadrex as a whole and the various  
19 findings contained therein. Whether they were --

20 MR. SINKIN: One of the reasons --

21 MR. PIRFO: If I may finish my argument.

22 MR. SINKIN: I'm sorry.

23 MR. PIRFO: If that is his proffer of  
24 relevancy, then I would stand on my objection.

25 MR. SINKIN: One of the reasons --

1 MR. PIRFO: And rather than go on any further  
2 in this, I'll have no more to say on this, irrespective  
3 of what Mr. Sinkin says. He's got a free shot.

4 MR. SINKIN: One of the reasons Mr. Goldberg  
5 has stated that he did not consider the Quadrex report  
6 as significant a document as he might have otherwise was  
7 he was critical of the performance of Quadrex in certain  
8 ways.

9 JUDGE BECHHOEFER: I think we will overrule  
10 the objection. The witness may answer the question.

11 Q (By Mr. Sinkin) Well, let's see where we are  
12 now.

13 JUDGE BECHHOEFER: I think we were on the most  
14 appropriate.

15 Q (By Mr. Sinkin) Why was it decided that  
16 Quadrex was the most appropriate contractor to perform  
17 the review?

18 A We have two major contractors we could go to.  
19 One would be architect engineers, the other would be  
20 consultants.

21 Mr. Goldberg indicated to me that his view was  
22 that other architect engineers would refuse to review  
23 another architect engineer's work and, in fact, Brown &  
24 Root may not, in his view, would not permit us to bring  
25 in another architect engineer who's in direct

1 competition with Brown & Root to review how they do  
2 things.

3 We had another criteria, and because we wanted  
4 this to be an independent evaluation we wanted to select  
5 then a consultant who had not done any previous  
6 technical work on South Texas so they would come in as  
7 unbiased as possible. We looked at the major nuclear  
8 consultants.

9 We had one other item, the consultant had to  
10 be large enough and have enough expertise to do this  
11 whole review. There are a lot of consultants out there  
12 who are experts in piping analysis that don't know a  
13 thing about civil/structural and we didn't want to bring  
14 in five or six or ten consultants for this review that  
15 would be extremely difficult to coordinate.

16 So, we wanted to see if we could get one  
17 consultant who was big enough who had sufficient  
18 expertise and numbers of people who could do this  
19 review. Some of those included folks like EDS,  
20 Management Analysis Corporation, Teledyne, Quadrex,  
21 Torrey Pines Technology. Of all those consultants,  
22 every one of them except Quadrex had done on the South  
23 Texas Project some matter of technical work.

24 So, in my testimony when I indicate that  
25 Quadrex was the most appropriate contractor, they met

1 our criteria. We still did not know if this review  
2 could be done. I still had to contact Quadrex to see,  
3 one, did they have the individuals, were they available  
4 and could they do the review in the time frame that we  
5 indicated.

6 That's what I address in answer A when I say  
7 authorized then to proceed. We had gone far enough that  
8 in my mind, Mr. Goldberg's mind, they had the people,  
9 they were available and they could do the review in the  
10 time frame we needed.

11 Q Dr. Sumpter, on page 10 of your testimony,  
12 question 21 and answer 21 on the next page, if you would  
13 just review those for a moment.

14 A Okay.

15 Q Answer 21, you state that while you had  
16 indications that there were areas which would require  
17 close scrutiny for possible reporting to the NRC, you  
18 don't believe that you had been presented with  
19 sufficient information, you say I do not believe that  
20 prior to actual receipt of the final report, I had been  
21 presented with sufficient information to knowledgeably  
22 undertake an evaluation of any matters for potential  
23 reportability.

24 To your knowledge, did anyone else receive  
25 enough information on a Quadrex potential finding to



1 undertake a notification review pursuant to 50.55(e)?

2 A You mean anyone else within Houston Lighting &  
3 Power?

4 Q Anyone else at all that you know of, either  
5 Houston Lighting & Power, Brown & Root.

6 A No. Brown & Root was not privy to the  
7 assessments that Quadrex was making, you know, after  
8 they had done the reviews to any great --

9 Q During -- I'm sorry. Finish your answer,  
10 please.

11 A After Quadrex went back with the results of  
12 their review, other than at the end of that day when we  
13 had maybe a very broad discussion with Brown & Root over  
14 what Quadrex had found very generally, Brown & Root was  
15 not aware of any of the resulting deliberations by  
16 Quadrex or anything that was coming out.

17 Q The event you were just referring to, were  
18 those the periodic briefings by Quadrex?

19 A Yes.

20 Q In each of them Quadrex represented a general  
21 overview, but the specific findings would only be  
22 communicated to HL&P?

23 A No, it was usually at the end of the day or  
24 maybe the next day when the individual went back to  
25 California. And it was just very broad and very general

1 because the individual didn't even have time to think  
2 about what he had observed.

3 But in answer to your question, I don't feel  
4 either Brown & Root or anyone else from Houston Lighting  
5 & Power Company had enough information.

6 Q Well, were there any Quadrex findings that did  
7 get reviewed for possible notification pursuant to  
8 56.55(e) prior to the delivery of the report on May the  
9 7th?

10 A The only item that arose was during the course  
11 of the review -- I'm not sure if it was in the piping  
12 area or what area, Quadrex uncovered that Brown &  
13 Root -- there was an error in the ASME code as it was  
14 published on a stress allowable. Brown & Root had gone  
15 ahead in their design and used that stress allowable and  
16 it was in error. A later edition of the code had  
17 corrected the error, but Brown & Root had not  
18 incorporated that correction into their calculations.

19 So, Mr. Stanley indicated to me that he felt  
20 that needed to be reviewed, that was a potential item.  
21 And I passed that information along to our licensing  
22 people and Brown & Root and they went ahead and did a  
23 review and determined that even though they had the  
24 incorrect stress allowable in the design, that the  
25 actual calculated stresses were underneath even the

1 mistake, even the error in the code, they were still  
2 underneath that. So, it was not -- we deemed it not a  
3 deficiency, not reportable.

4 Q So, Mr. Stanley presented you with enough  
5 information for you to initiate a review of whether a  
6 potentially reportable deficiency had been found before  
7 May the 7th, 1981.

8 A Yes. That was rather obvious. I mean, there  
9 was a blatant difference in the code.

10 JUDGE BECHHOEFER: Dr. Sumpter, was that sent  
11 to the Incident Review Committee?

12 THE WITNESS: I don't know if it got that  
13 far. I know Brown & Root immediately went to work on it  
14 and I think within a day or so determined that the  
15 calculated allowables were less than the code allowables  
16 in either case and I don't think it went any further  
17 than that.

18 I mean, they did that initial evaluation to  
19 determine even if there was a deficiency and I think  
20 Brown & Root internally determined that there was not  
21 even a deficiency. So, that may have been -- I don't  
22 know what happened then relative to whether Brown & Root  
23 then communicated that to our licensing or not. I  
24 wasn't -- I was aware -- Brown & Root got back to me and  
25 indicated that their evaluation indicated they were well

1 within code allowables, so there was not even a  
2 deficiency.

3 Brown & Root's normal responsibility is if  
4 they identify a deficiency, then they notify HL&P. And  
5 I'm sure they do lots of investigations inhouse where  
6 someone may think there's a deficiency and then if Brown  
7 & Root determines that there was not one, that probably  
8 is never communicated to HL&P.

9 JUDGE BECHHOEFER: Do you know whether or not  
10 they sent it through their own Incident Review  
11 Committee?

12 THE WITNESS: I'm trying to remember what was  
13 the procedure back in 1981.

14 JUDGE BECHHOEFER: I'm not really sure, I've  
15 seen references to their Incident Review Committee,  
16 but --

17 THE WITNESS: I can't recall right now. I'd  
18 have to go back and check and see exactly what Brown &  
19 Root's internal procedure called for. I can't  
20 remember.

21 MR. GUTTERMAN: Mr. Chairman, I wonder if this  
22 might be a likely time for a break. We've been going  
23 for a couple hours now.

24 MR. SINKIN: Mr. Chairman, I'd like to  
25 continue for about three or four more minutes and then

1 I'll be at a breaking point.

2 MR. GUTTERMAN: That's fine.

3 JUDGE BECHHOEFER: Okay.

4 Q (By Mr. Sinkin) Dr. Sumpter, I'm handing you  
5 what I ask be marked as CCANP 94. I'll give you a  
6 moment to review that. As soon as you have reviewed it,  
7 if you would just indicate to me that you have.

8 (CCANP Exhibit No. 94 marked for  
9 identification.)

10 (No hiatus.)

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1 Q Who is Mr. A.B. Poole?

2 A Mr. Poole is an engineer who worked for me who  
3 was assigned to the South Texas project.

4 Q And Mr. M.E. Powell?

5 A Mr. Powell was, I believe at that time, the  
6 team leader in licensing and I believe, yeah, at that  
7 time was chairman of the IRC.

8 Q And is this the problem of the error in the  
9 code that you were just discussing?

10 A Yes.

11 MR. SINKIN: Mr. Chairman, I would move CCANP  
12 94 into evidence.

13 MR. PIRFO: No objection, Mr. Chairman.

14 MR. GUTTERMAN: No objection.

15 JUDGE BECHHOEFER: CCANP 94 will be admitted  
16 into evidence.

17 (CCANP Exhibit 94 received  
18 in evidence.)

19 Q (By Mr. Sinkin) Dr. Sumpter, I'm distributing  
20 what I will ask be marked as CCANP 95 and ask you to  
21 review this document and indicate to me when you have  
22 completed your review.

23 MR. SINKIN: I'm one short for the moment.  
24 I'll see if I can -- oh, no I'm not.

25 THE WITNESS: Okay.

1 (CCANP Exhibit 95 marked  
2 for identification.)

3 Q (By Mr. Sinkin) Do you recognize this  
4 document, Dr. Sumpter?

5 A Not right offhand. I was not on the  
6 distribution list, so I can't recall if I ever saw this  
7 document or not.

8 Q The document, itself, says that it is minutes  
9 of the Incident Review Committee meeting, actually  
10 doesn't use the word "minutes," it just Incident Review  
11 meeting Committee concerning the primary and secondary  
12 stress intensity for upset loads in the design of the  
13 containment mechanical penetrations.

14 That is the problem we've been discussing, is  
15 it not?

16 A I believe it is, yes.

17 MR. SINKIN: Mr. Chairman, I can move in into  
18 evidence now. If there's some problem with the witness'  
19 familiarity, we can wait for a later witness, but we  
20 obviously have a number of later witnesses.

21 MR. GUTTERMAN: I've got no objection to the --

22 MR. SINKIN: All right. We move CCANP 95 into  
23 evidence.

24 MR. REIS: I have an objection to it. My  
25 objection is that I don't know where it is probative to

1 any issues that we are trying to establish or that CCANP  
2 is trying to establish in this proceeding; it concludes  
3 no significant safety hazard in the last paragraph, and I  
4 don't understand why we're burdening the record with it.

5 MR. GUTTERMAN: I wouldn't dispute the staff's  
6 position on that.

7 MR. REIS: And unless it will further the  
8 Board's determination in this proceeding, I see no reason  
9 to have it admitted in to evidence as an exhibit.

10 MR. SINKIN: Mr. Chairman, what you have in  
11 this document is a document that is in the midst of the  
12 Quadrex audit as the document refers to it, there was at  
13 least one finding which was reviewed for potential -- was  
14 found by one of Dr. Sumpter's engineers to be a  
15 potentially reportable item which he reviewed and  
16 determined was not potential, that's the previous  
17 document and then referred to the Incident Review  
18 Committee and which they reviewed and agreed with his  
19 determination. But there was in the midst of the Quadrex  
20 report, at least one item that did come up as a  
21 potentially reportable item and did receive review.

22 MR. GUTTERMAN: Mr. Chairman, I really don't  
23 want to argue at length about Mr. Sinkin's  
24 characterization of somebody determining it's potentially  
25 reportable; it is exactly the opposite of what happened.

1 It was determined it was not potentially reportable, and  
2 it was not reported. That's the essence of what Dr.  
3 Sumpter testified and the documents -- well, he didn't  
4 remember that the IRC looked at it the documents confirm  
5 his testimony. I can't see that is adds anything to the  
6 record.

7 MR. SINKIN: I may have misspoken myself. I  
8 intended to say that an item in the Quadrex report was  
9 considered to contain sufficient information to initiate  
10 a review as to whether it should be potentially  
11 reportable prior to the delivery of the Quadrex report.

12 MR. GUTTERMAN: Mr. Chairman, I don't want to  
13 seem argumentative about this but now the  
14 characterization is that this is an item in the Quadrex  
15 report. Obviously the report didn't exist at this time.

16 MR. SINKIN: An item in the Quadrex review, if  
17 that will help.

18 Mr. Chairman, I have one other observation.  
19 Dr. Sumpter testified that due to the fact he did not  
20 know whether the item referred by Mr. Poole to I believe  
21 it was Mr. Powell and copied to him had actually been --  
22 CCANP 94, memorandum from Poole to Powell, copy to  
23 Sumpter; he testified he did not know whether that item  
24 had actually been referred to the Incident Review  
25 Committee. This document puts into the record that in

1 fact it was referred to the Incident Review Committee.

2 JUDGE SHON: Dr. Sumpter, did this item or any  
3 sort of variation on it or something based upon it get  
4 into the Quadrex report at all?

5 THE WITNESS: I believe there is a reference to  
6 this particular item.

7 JUDGE SHON: There's some reference to it. In  
8 one of the individual discipline findings or in one of  
9 the generic findings or what, can you point me to it?

10 THE WITNESS: I hope I can expeditiously point  
11 you to it. I believe it's in a discipline -- okay, I'm  
12 not sure if it made it to the finding level. I know it's  
13 in one of the assessments. Trying to think where they're  
14 at. Yes, it's -- question M-30.

15 JUDGE SHON: I see, I don't have the questions.

16 THE WITNESS: This is in a review let me see,  
17 question -- the question had to do with: In the  
18 procurement of equipment, are appropriate material  
19 considerations included relative to potential for  
20 intergranular stress corrosion cracking, compatibility  
21 with attachment piping and water chemistry.

22 To perform that review, Quadrex looked at a  
23 number of specifications in the mechanical department.  
24 And in the review of one of those specifications, they  
25 found this error, if you will; they weren't looking for



1 it, they just found it. And the words from Quadrex are,  
2 and it's asterisk noted at the bottom of  
3 the page: "At one time, there was an unfortunate  
4 typographical error in the hopper stress  
5 allowable diagrams of ASME Section III, Appendix XIII and  
6 ASME Section VIII, Division 2. This error indicated an  
7 allowable stress of  $3.0KSm$  where  $K$  equals 1.1 for upset  
8 loads. However, in both codes the main text did not have  
9 this typographical error. Section VIII was corrected in  
10 the Summer, 1974 addenda to the 1974 edition, and Section  
11 III was corrected in the Winter, 1978 edition to the 1977  
12 version. I guess that's all they indicate.

13 And that was found in the review of the  
14 specification concerning mechanical containment  
15 mechanical penetrations.

16 As indicated what happened, Quadrex, the  
17 reviewer indicated that to Mr. Stanley, he notified me, I  
18 in turn notified Brown & Root and my licensing group;  
19 Brown & Root went ahead and did their internal review and  
20 came back to me within a day or so and indicated that  
21 everything was all right, there was no deficiency.

22 I did not then go ahead and follow up with my  
23 licensing group because they were in the midst of this  
24 review and Brown & Root had indicated to me there was no  
25 problem.

1           And I assume now that all the appropriate  
2 contacts would be made to close this issue out.

3           JUDGE SHON: And it appears from this other  
4 letter that the incident review committee looked at it  
5 and decided it was not reportable.

6           THE WITNESS: Yes. And they would have gotten  
7 a lot of these detailed technical items from Brown &  
8 Root.

9           JUDGE SHON: I see.

10          Q     (By Mr. Sinkin) One moment. If I could ask a  
11 question on what he's just said. Did you say that Dr.  
12 Stanley contacted you about this event?

13          A     Yes, he told me that there appeared to be an  
14 error in the way the stress allowable was indicated in  
15 the code, and Brown & Root had copies from the code the  
16 typographical error and when the code was corrected,  
17 Brown & Root had not updated their specification to  
18 include the correction.

19          Q     Did you then tell Mr. Poole?

20          A     No. Mr. Poole was the engineer who the IRC  
21 probably had look at this to see -- this was his area of  
22 expertise. I probably called Mr. Jacobi who was the head  
23 of my licensing group at that time.

24          Q     You called Mr. Jacobi for what purpose?

25          A     To inform him that Quadrex had uncovered an

1     apparent deficiency that might be reportable and that I  
2     had already contacted Brown & Root and that they were  
3     investigating this.

4             JUDGE BECHHOEFER: We will admit this document  
5     into evidence. We will admit it into evidence.

6             (CCANP Exhibit 95 received  
7     in evidence.)

8             MR. GUTTERMAN: May I renew my suggestion that  
9     we take a short break.

10            JUDGE BECHHOEFER: Is this the end of the three  
11    or four minutes?

12            MR. SINKIN: Yes.

13            JUDGE BECHHOEFER: Okay, let's take a fairly  
14    short break.

15            (Recess.)

16            JUDGE BECHHOEFER: Okay, back on the record.

17            Q     (By Mr. Sinkin) Mr. Stanley, on page eleven of  
18    your testimony at line 21, you state that you had  
19    received volumes two and three on April 29th of the  
20    Quadrex report. Dr. Sumpter, excuse me.

21            A     Late in the afternoon, I understand.

22            Q     It is late in the afternoon. Those were the  
23    final volumes, they weren't going to be anymore changes  
24    to those. Is that correct?

25            A     Those were the final volumes, yes.

1 Q And what did you do with them, if anything?  
2 Did you just put them on your desk and leave them there,  
3 what did you do with those volumes?

4 A I didn't do anything with them, just left them  
5 in my office.

6 Q Until May the 7th?

7 A That's correct.

8 Q Did anyone at any time look at them in your  
9 office during those days?

10 A No, not that I'm aware of.

11 Q The meeting on May the 7th when Quadrex  
12 presented their findings to HL&P and Brown & Root, do you  
13 remember the HL&P personnel who were present for that  
14 meeting?

15 A I can't remember all of them. I know -- of  
16 course I was there, Mr. Goldberg I believe Mr. Turner who  
17 was the vice-president of engineering and technical  
18 services, I believe is his title, construction and  
19 technical services; I believe -- I'm not sure if Mr.  
20 Barker and Mr. Blau were there. I'm trying to visualize  
21 where people were sitting at the table and I can't recall  
22 absolutely that they were there.

23 Q Mr. Briskin?

24 A He may have been. Again, I can't recall.

25 Q Was there anybody there from the Quality

1 Assurance Department of HL&P?

2 A I don't believe so, no.

3 Q Was there anybody there from the licensing  
4 department at HL&P such as would have been -- Mr. Jacobi  
5 I guess at that time was in licensing; anybody from that  
6 department?

7 A I don't believe so.

8 Q At the Brown & Root meeting on May 11th that  
9 you attended, later --

10 A May 8th you mean.

11 May 7th, I'm sorry, we'll get the day right.

12 Q We're on May 7th Were you present at the Brown  
13 & Root meeting on May 7th, the afternoon meeting?

14 A Yes, I was.

15 Q Were you present from the time it convened?

16 A Yes, I believe I was.

17 Q Is it not true, Dr. Sumpter, that in the  
18 afternoon after Quadrex had made their presentation, you  
19 had a meeting with Mr. Goldberg and others to discuss  
20 that presentation, May the 7th we're talking about.

21 A No. We, myself and Mr. Stanley may have had  
22 some discussions with Mr. Goldberg after the meeting at  
23 the Electric Tower. I don't believe we had any meeting  
24 after that. I think we went back to read the report.

25 Q You, Mr. Stanley and Mr. Goldberg after the



1 meeting adjourned with Brown & Root HL&P and Quadrex, the  
2 three of you met?

3 A We might have, you know, just -- since we were  
4 all in the same room, had some discussions.

5 Q But nothing -- does anything come to mind about  
6 when you discussed?

7 A I think at that time at that time, Mr. Goldberg  
8 expressed his initial reaction to to the report, along  
9 the lines of it looked very serious. And Mr. Stanley  
10 replied back to them, I'm not sure of the exact words,  
11 but they conveyed the thoughts that, "It's not what  
12 you're telling me." I don't think these are the exact  
13 words. But it was along that line, that "The thoughts  
14 you are conveying to me are not what we meant to say to  
15 you relative to how serious this was."

16 I think the context Mr. Goldberg was talking  
17 was a quality technical design flaw type of situation.

18 Q How long did that meeting last?

19 A I don't think it -- that discussion did not  
20 last very long, maybe five, maybe five or ten minutes.

21 Q And between -- are we talking about right after  
22 the meeting adjourned?

23 A Yes, right after the meeting adjourned.

24 Q Just you are in the same room and you sit down  
25 and talk five or ten minutes?

1 A Yes.

2 Q And between that time and the time you went to  
3 the Brown & Root meeting, did you again meet with Mr.  
4 Goldberg and Mr. Stanley?

5 A No. Mr. Stanley left the Electric Tower, that  
6 meeting, and went directly to Brown & Root, so that he  
7 could be available to answer any questions that Brown &  
8 Root had on any item in his report to assist them in  
9 their review.

10 And then I believe the next time I saw Mr.  
11 Stanley was at the meeting of Brown & Root and then after  
12 that, he flew back to California.

13 Q Can you give me a rough time frame as to when  
14 the meeting adjourned between HL&P and Brown & Root, you  
15 have your five or ten minute meetings, that ends and then  
16 comes the Brown & Root meeting at 5:00 o'clock in the  
17 afternoon, I believe you testified.

18 A I believe the HL&P meeting started around 9:00  
19 o'clock, ended somewhere close to noon and then Brown &  
20 Root commenced their meeting I guess 5:00 5:00 o'clock in  
21 the afternoon, sometime around there.

22 Q Did you go to the Brown & Root meeting with Mr.  
23 Robertson?

24 A Yes. I don't know if we went in the same car.  
25 We went separately but we were both at the meeting.

1 Q Were you both there before it began?

2 A Well, we were there at the beginning. I don't  
3 know how soon we arrived.

4 Q But you know for sure you were there at the  
5 beginning?

6 A And he was there, yes.

7 Q And he was there, okay.

8 At the Brown & Root meeting on May the 7th,  
9 were there some Quadrex findings that they could not  
10 resolve at that time because the work in question was  
11 being done by a subcontractor?

12 You understand my question?

13 A You mean Brown & Root did not have enough  
14 information?

15 Q Brown & Root did not have enough information to  
16 resolve the problem at that time because the work was  
17 being done by a subcontractor?

18 A I don't believe so. As far as I can recollect,  
19 Brown & Root made the decision on all of the most serious  
20 discipline findings.

21 Q Dr. Sumpter, I'm going to hand you a document  
22 which I ask be marked for identification as CCANP 96 and  
23 ask you to review that full, and let me know when you're  
24 finished.

25 (CCANP Exhibit 96 marked

1 for identification.)

2 THE WITNESS: Okay.

3 Q (By Mr. Sinkin) You've had a chance to review  
4 that?

5 A Yes.

6 Q Does this document perhaps refresh your memory  
7 that on findings in the Quadrex report, in particular  
8 findings in section 4.6.2.1 that related to work done by  
9 the NUS Corporation, that Brown & Root found it necessary  
10 to refer those findings to NUS before they could make a  
11 determination on them as to their possible reportability?

12 A I've got to look at the findings.

13 Q Fine.

14 While you're looking, Dr. Sumpter, I'm going to  
15 distribute what I ask be marked as CCANP 97. It may help  
16 you in answering the question.

17 (CCANP Exhibit 97 marked  
18 for identification.)

19 THE WITNESS: Okay.

20 Q My question was whether these documents would  
21 refresh your memory that Brown & Root found it necessary  
22 to refer certain Quadrex findings to the NUS Corporation  
23 before Brown & Root could make their ultimate  
24 determination on reportability of those findings?

25 A If you look at the most serious findings, which

1 are the ones Brown & Root reviewed that evening, the only  
2 reference -- two references to NUS. One is in part B.

3 Q We're on page 4-59?

4 A I'm sorry, Page 4-59, part B, says,  
5 about halfway down: Obvious errors  
6 were also discovered in an NUS analysis inside  
7 containment. That error as Quadrex states was a very  
8 conservative error. So there was no deficiency noted.  
9 The only other time NUS is mentioned is on page  
10 4-60, top of the page says: Except for a containment  
11 heat seeking surface areas analysis and an NUS LOCA  
12 environmental analysis, there were no analyses found that  
13 were such correct or current."

14 In other words, there was an NUS analysis that  
15 was deemed all right.

16 All of the rest of the items in this finding  
17 refer to Brown & Root's nuclear analysis group. So that  
18 evening, there was such information within Brown & Root  
19 because it's all referred to to Brown & Root except for  
20 the two instances that I indicated. And the only error  
21 that was found was a very conservative error.

22 So as best I can recollect, there was enough  
23 information from Brown & Root to conclude that none of  
24 these items -- that these items here could be dealt with  
25 in that meeting.



1 Q If you look at CCANP 97 --

2 A Pardon me, what's that.

3 Q It's the second one I handed you, it has the  
4 NUS Corporation in the upper left corner. Should be in  
5 on the table in front of you.

6 A Oh the interoffice memo?

7 Q No.

8 A I'm sorry, I haven't seen this, this one right  
9 here. This is 97?

10 (No Hiatus.)

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1 Q 97.

2 A Yes, I made a mistake in my earlier answer. I  
3 didn't realize that the remainder of page 4-60 and 4-61  
4 were most serious. I thought there was a break there.

5 Q Okay.

6 A So, let me review those --

7 Q Surely.

8 A -- relative to their references to NUS.

9 Okay. Can I go back to my previous answer --

10 Q Please do.

11 A -- and address these other questions?

12 Q Yes, please do.

13 A On page 4-60, number E. Mr. Robertson, who  
14 before he joined HL&P headed a nuclear analysis group at  
15 Stone & Webster, gave information to me that this  
16 Quadrex finding was, in fact, incorrect. That the use  
17 of the computer code that was used by NUS, RELAP 3, was  
18 a code that was acceptable to the NRC and that as far as  
19 he was concerned, and he voiced this view at the  
20 meeting, this was not a deficiency. Brown & Root -- or  
21 NUS in this case was using a perfectly acceptable code.

22 Number -- part C is Brown & Root's nuclear  
23 analysis group.

24 Part D is Brown & Root's nuclear analysis  
25 group.

1 I addressed E.

2 Part F is again a function of Brown & Root's  
3 nuclear analysis group. They had planned to do that.

4 G, H and I were all Brown & Root's nuclear  
5 analysis group.

6 J, the agreement we had reached with the NRC  
7 was that in the IVC, which this particular finding  
8 applies to, we would only have to analyze a crack break,  
9 we would not have to analyze a double-ended break. In  
10 other words, we would only have to take the pressure in  
11 the IVC from a crack break. NUS -- or Brown & Root  
12 asked NUS to go ahead and do a double-ended break for  
13 conservatism. So, the fact that a double-ended break  
14 which releases far more energy than a crack break was  
15 analyzed, that's not a deficiency, that's just a more  
16 conservative approach.

17 K, L, M, N and O all are the responsibility of  
18 Brown & Root's nuclear analysis group.

19 So, I reiterate my previous statement that  
20 there was enough information at that meeting to evaluate  
21 these items. Those items that had NUS responsibility,  
22 there was enough information from the various people  
23 there to determine that it was not a problem, it was  
24 either conservative or in one case Quadrex was just  
25 incorrect.

1 Q Do you remember at that meeting a Brown & Root  
2 decision that the findings that involved NUS would be  
3 referred to NUS for further review before a final  
4 determination on potential reportability would be made?

5 A I can't recall that.

6 Q Did you ever see either of these two documents  
7 before, Dr. Sumpter?

8 A No, this is the first time I have ever seen  
9 these. I have not seen these before. As best I can  
10 recollect.

11 Q On page 7, line 20, Dr. Sumpter --

12 A Hold it one second. Let me get reorganized  
13 here.

14 Q -- of your testimony.

15 A Page 7?

16 Q Page 7, line 20.

17 A All right.

18 Q What do you intend to indicate when you put  
19 the word onsite in quotations there?

20 A Quadrex personnel came to Houston to Brown &  
21 Root's offices and conducted their reviews in Brown &  
22 Root's offices.

23 Q They did not actually go out to the site, is  
24 what you're saying?

25 A I believe three -- I think three Quadrex

1 people on a Sunday did journey to the STP site. They  
2 didn't conduct any reviews with anyone, they just wanted  
3 to tour the plant and get an idea of what was being  
4 constructed in the plant.

5 Q Okay.

6 On page 8, at line 6, you state that where you  
7 had specific knowledge of aspects of the STP design or  
8 felt that certain areas required additional exploration  
9 by Quadrex, that you participated in the review  
10 sessions. What form did your participation take?

11 A Well, Quadrex had asked a specific question, a  
12 series of questions. And the way the meeting opened  
13 was -- would be that the Quadrex person, the Quadrex  
14 expert, would ask Brown & Root to respond to the  
15 question and then there would be interaction between  
16 Quadrex people and the Brown & Root people over various  
17 aspects of the answer. Either myself or some of my  
18 staff who was at these meetings may from time to time  
19 interject either information or ask additional questions  
20 if we felt a need to, you know, to do so, with the  
21 purpose of making sure that in our opinion Quadrex was  
22 getting sufficient information.

23 Q In question 15, answer 15 on page 8, you state  
24 that Quadrex met with HL&P several times during the  
25 course of its review in order to keep HL&P apprised of



1 its efforts.

2 Did you attend all or most of those meetings  
3 that you were describing there between Quadrex and HL&P?

4 Let me -- I'm going to -- let me sharpen this  
5 question a little bit because I assume that there is  
6 some constant interaction of some kind going on maybe  
7 among various personnel. Let's read that question to  
8 talk about at a management level.

9 MR. GUTTERMAN: Can I make a suggestion here?

10 MR. SINKIN: Yes.

11 MR. GUTTERMAN: Since this testimony  
12 cross-references Mr. Goldberg's testimony, it might be  
13 helpful to Dr. Sumpter to see which meetings were  
14 referenced in Mr. Goldberg's testimony.

15 MR. SINKIN: If I can find that reference in  
16 Mr. Goldberg's testimony.

17 Q (By Mr. Sinkin) Well, in Mr. Goldberg's  
18 testimony he refers to very specific meetings, April  
19 15th, April 30th --

20 MR. GUTTERMAN: April 13th?

21 MR. SINKIN: I'm sorry.

22 MR. GUTTERMAN: April --

23 MR. SINKIN: April 13th, April 30th --

24 MR. GUTTERMAN: March 18th and May 7th?

25 Q (By Mr. Sinkin) Okay. March 18th, April

1 13th, April 30th, those meetings and those are the  
2 meetings you're referring to here?

3 A Yes, those are the meetings I'm referring to.

4 Q Did you attend each of those meetings?

5 A Yes, I did.

6 Q Did you on other occasions meet with the -- I  
7 guess it would be Mr. Stanley who was the manager of the  
8 study. Did you meet with him to kind of get a view of  
9 what they were doing other than at these formal  
10 presentations?

11 A Yes, I indicate later on in my testimony.

12 Q If you would like to direct my attention to  
13 that?

14 A Okay. Well, on question 16 on page 8, the  
15 informal review was over in Brown & Root's office. I  
16 visited Quadrex on April the 10th.

17 Q And you visited with Mr. Stanley at that time?

18 A Yes, sir. And the reviewers. And then I  
19 believe I went out to Quadrex again on April 15th.

20 Q When you say the formal review was ended by  
21 you at the time of your visit of April 8 through 10th,  
22 did that mean that there was going to be no further  
23 interaction between Quadrex and Brown & Root or Quadrex  
24 and HL&P at that point?

25 A I meant the formal review relative to Quadrex

1 formally meeting in Brown & Root's offices. Brown &  
2 Root was -- as a result of those meetings had indicated  
3 they would send Quadrex some additional information and  
4 that information was still being sent to Quadrex and  
5 evaluated during April.

6 Q On page 9 you state that after you got the  
7 draft copies of Volumes 2 and 3, you furnished the draft  
8 questions, answers and assessments to HL&P lead  
9 discipline engineers. Did you also share those with Mr.  
10 Goldberg?

11 A No, I did not.

12 Q In question 18 and 19 you discuss a suggestion  
13 from Mr. Goldberg that the findings of Quadrex be  
14 categorized, and it's a suggestion you conveyed to Mr.  
15 Stanley and he responded by accepting partially the  
16 suggestion but modifying the categories somewhat. Is  
17 that a correct characterization?

18 A That's correct.

19 Q There are two kinds of categories in the  
20 Quadrex report. One of those categories that appear in  
21 Mr. Goldberg's letter to Mr. Stanley, such as most  
22 serious, serious, that kind of category. There are also  
23 categories of disciplines, civil/structural, mechanical,  
24 electrical. Who created the discipline findings?

25 A Who creating the finding?

1 Q The categories, excuse me. Who created the  
2 discipline categories?

3 A The discipline categories were determined back  
4 in January.

5 Q How were they determined?

6 A As I thought I indicated earlier, Mr. Goldberg  
7 and I were discussing what he would like to be reviewed  
8 on and we started to have dialogue on the unique nuclear  
9 areas and that sort of thing.

10 Q Okay.

11 A The disciplines sort of naturally fell out of  
12 that.

13 Q Okay, because I was going to say that  
14 dialogue, as I remember it, was what are the unique  
15 nuclear areas to be reviewed. And you're saying that  
16 out of that at that time the categories were developed?

17 A Yes, that's correct.

18 Q After Mr. Stanley made the modification that  
19 you allude to in question 19, answer 19 to the  
20 categories, did you inform Mr. Goldberg of Mr. Stanley's  
21 change?

22 A To the best of my recollection, and it's very  
23 vague, I may have and I may not have. I've been  
24 thinking about that since that was brought up with Mr.  
25 Goldberg over the last several days and I just can't

1 recall whether I got back to him or not on that.

2 Q Let's go back to May the 7th. 5:00 o'clock in  
3 the afternoon you go over to Brown & Root's offices to  
4 attend a meeting discussing the Quadrex report.

5 I'd like to have your impressions, your  
6 personal observations of that meeting and I'll ask some  
7 specific questions.

8 Did the Brown & Root personnel appear to be  
9 hostile to the Quadrex report in the sense that it was a  
10 threatening report, a bad report, anything like that?

11 MR. GUTTERMAN: I think I understand the  
12 question, but I'm not sure. Are we talking about the  
13 afternoon meeting?

14 MR. SINKIN: 5:00 o'clock May the 7th, Brown &  
15 Root gets together. They've had a briefing by Quadrex.  
16 Now it's their turn to talk about it.

17 Q (By Mr. Sinkin) What is the atmosphere? Is  
18 it a hostile atmosphere from this report?

19 A You're looking for their attitude towards -- I  
20 guess I need some help on clarification. You mean their  
21 attitude towards the whole report, towards the whole  
22 exercise, is there tension in the room or, you know,  
23 that kind of thing?

24 Q That's the sort of thing I'm after. Any  
25 observations that you had that you can share with us.



1           A     I would say there was maybe some tension in  
2     the room, but it wasn't very much. It was a very  
3     businesslike meeting. Brown & Root had a lot of work to  
4     get done. It was going on 5, 6, 7, 8:00 o'clock at  
5     night. They had been working all day. People were  
6     tired and the meeting was run quite professionally.

7                     There were some -- obviously some discussion  
8     and maybe some disagreements back and forth, but it  
9     didn't -- the meeting did not degenerate into any  
10    shouting or screaming or anything like that.

11           Q     Okay. Was there much argument over whether  
12    particular findings were potentially reportable  
13    findings?

14           A     No, I don't believe so. When there were -- I  
15    know Mr. -- I made some comments when I felt Brown &  
16    Root had not gotten the full understanding of my  
17    understanding of what Quadrex was saying in some cases  
18    and I supplied that information. But Brown & Root had  
19    pretty much made their decisions and I don't recall  
20    there being much disagreement or argument between Brown  
21    & Root persons over these type items.

22                     Mr. Robertson and I primarily listened and  
23    provided information if we thought it necessary, but we  
24    did not interject ourselves into opinions on whether we  
25    thought something was reportable or not. We wanted

1 Brown & Root to give us their best view as they saw it.

2 Q Did the Brown & Root review include documents  
3 other than the Quadrex report volumes themselves?

4 MR. GUTTERMAN: Let's get that question a  
5 little bit clarified. Are you talking about whether  
6 documents other than the Quadrex report were actually  
7 used in the meeting that afternoon? Are you asking what  
8 engineers looked at during the day?

9 MR. SINKIN: I see. Excuse me.

10 Q (By Mr. Sinkin) At the 5:00 o'clock May the  
11 7th meeting, were documents used other than the Quadrex  
12 report, documents reviewed as part of that process?

13 A Well, Brown & Root had their sheets. They had  
14 typed up a sheet for each finding with these various  
15 blocks on whether they agreed with a finding, disagreed  
16 with a finding, whether they felt it was potentially  
17 reportable or not, and they were filling out those  
18 sheets. Some of them had been filled out earlier. I  
19 guess most of them had been filled out earlier.

20 Q Most of them had been filled out between the  
21 time the meeting adjourned at noon and 5:00 o'clock that  
22 afternoon?

23 A I believe so. And the lead engineer in each  
24 area would make his report to the chairman of the  
25 meeting on what his opinion or views were on these

1 items. He may have brought other documents in and used  
2 them to demonstrate his results from his review or not.  
3 That may have happened. I can't recall exactly.

4 Q And how long did that meeting last?

5 A I think it went well on to 8 or 9:00 o'clock  
6 that evening.

7 Q And then it adjourned for the day?

8 A For the night.

9 Q For the night?

10 MR. SINKIN: Mr. Chairman, I am at a breaking  
11 point and I see that it's a few minutes after 6:00. I  
12 can do either way.

13 JUDGE BECHHOEFER: I think this would be a  
14 good time to break.

15 Anything before we break that --

16 MR. GUTTERMAN: Two things, Mr. Chairman. One  
17 is I had mentioned earlier that we were trying to  
18 prepare a written motion to quash subpoenas and we have  
19 that now and we're distributing it to the parties and  
20 have copies for the Board.

21 The other thing is I gathered earlier in the  
22 day the prognosis was that we would not get to another  
23 witness tomorrow. Is that still the prognosis?

24 JUDGE BECHHOEFER: That's correct.

25 Well, let's go off the record.

1 (Discussion off the record.)

2 (Hearing recessed at 6:10 p.m.)

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CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before  
the UNITED STATES NUCLEAR COMMISSION in the matter of:

NAME OF PROCEEDING: EVIDENTIARY HEARING  
HOUSTON LIGHTING AND POWER COMPANY,  
ET AL (SOUTH TEXAS PROJECT, UNITS 1  
AND 2)

DOCKET NO.: STN 50-498-OL  
STN 50-499-OL


PLACE: HOUSTON, TX

DATE: Thursday, July 18, 1985

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



R. Patrick Tate, CSR



Susan R. Goldstein, CSR

Official Reporters