

ORIGINAL

# UNITED STATES NUCLEAR REGULATORY COMMISSION

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IN THE MATTER OF:

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

HOUSTON LIGHTING AND POWER COMPANY,  
et al.

(SOUTH TEXAS PROJECT, Units 1 and 2)

EVIDENTIARY HEARING

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 Friday, 9 August 1985  
17

18 The hearing in the above-entitled matter was  
19 convened, pursuant to adjournment, at 9:10 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:

6 MAURICE AXELRAD, Esq.,  
7 ALVIN GUTTERMAN, Esq.,  
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11 Washington, D.C.  
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13 On behalf of the Nuclear Regulatory Commission Staff:

14 EDWIN J. REIS, Esq.,  
15 ORESTE RUSS PIRFO, Esq.,  
16 Office of the Executive Legal Director  
17 WILLIAM L. BROWN, Regional Counsel, Region IV.  
18

19 On behalf of the Intervenor:

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23 Representative for Citizens Concerned About  
24 Nuclear Power.  
25

1 FRIDAY, AUGUST 9, 1985

2 C O N T E N T S

3  
4 WITNESSES: DIRECT CROSS REDIRECT RECROSS BOARD

5 A PANEL CONSISTING OF: }

6 ROBERT G. TAYLOR, }

7 ROBERT F. HEISHMAN, } - 15024 15062 15066 15034

8 ERIC H. JOHNSON and } 15097

9 GEORGE L. CONSTABLE } 15098

10  
11  
12 EXHIBITS: FOR ID. IN EVD

13 Applicants' No. 77 15025 15032

14 Applicants' No. 78 15032 15034



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

JUDGE BECHHOEFER: Good morning, ladies and gentlemen. Are there preliminary matters this morning?

MR. SINKIN: Mr. Chairman, I have a matter but I think I'll wait until after the panel is finished.

JUDGE BECHHOEFER: Okay. Anything from the other.

MR. REIS: Nothing.

JUDGE BECHHOEFER: Mr. Sinkin, did you want to ask the panel the one last question or do you want to wait? If it isn't asked by the time it gets back to you, you can ask it.

MR. SINKIN: Okay. I'll wait.

JUDGE BECHHOEFER: It happens to on my list of questions anyway, so -- Mr. Axelrad Mr. Gutterman.

MR. GUTTERMAN: This is my turn.

## CROSS-EXAMINATION

By Mr. Gutterman:

Q Just trying to clarify something from the testimony yesterday, Mr. Johnson. To your knowledge, has the NRC ever cited a licensee for failure to report within 24 hours an item which ultimately turned out not to be reportable?

A I don't believe they have. And I believe if

1 there were done, it would have to be withdrawn on  
2 challenge.

3 MR. GUTTERMAN: Let's see. What exhibit are we  
4 up to? Do you know my exhibit number? I believe we're  
5 up to 77.

6 (Applicants' Exhibit No. 77  
7 for identification.)

8 Q (by Mr. Gutterman) Mr. Johnson, I'd like to  
9 hand you a document that we've identified as Applicants'  
10 Exhibit 77, and what it is is the NRC staff response to  
11 licensing board memorandum and order regarding the  
12 reportability of Quadrex report.

13 MR. GUTTERMAN: I don't have extra copies for  
14 the Board and the parties but I believe we all have them.

15 MR. REIS: I don't have it readily available.

16 MR. SINKIN: Which document, the NRC staff --

17 MR. REIS: I don't have it available at this  
18 point.

19 MR. AXELRAD: The document you referred to in  
20 your own testimony.

21 MR. GUTTERMAN: I don't want to ask detailed  
22 questions on it I just want to get the witness to  
23 identify it and tie it to his testimony.

24 MR. SINKIN: Could you identify it again,  
25 please.

1 MR. GUTTERMAN: NRC staff response to licensing  
2 board memorandum and order regarding the reportability of  
3 the Quadrex report dated August 24, 1984.

4 JUDGE BECHHOEFER: Oh, I have that. It may  
5 take me two minutes to get it, but I've got it.

6 (Discussion off the record.)

7 Q (By Mr. Gutterman) The first question I wanted  
8 to ask you, Mr. Johnson, is the document that we've  
9 marked as Applicants' Exhibit 77 the document you  
10 referred to on page 8 of your testimony in the first full  
11 paragraph?

12 A (By Mr. Johnson) Yes.

13 Q Did Region IV participate in the preparation of  
14 the enclosure?

15 A Yes, that was prepared by Region IV.

16 Q And does section five of the memorandum which  
17 begins on page 8 accurately describe --

18 MR. SINKIN: Excuse me, Mr. Chairman, I think  
19 I'll object to any further questioning on this document.  
20 If I remember correctly, the Board said that the Staff's  
21 position on categorization taken in this particular  
22 document was irrelevant to the boards concerns.

23 MR. GUTTERMAN: I don't believe the Board ever  
24 said that, Mr. Chairman.

25 JUDGE BECHHOEFER: I think we said it was

1 wrong, but --

2 MR. SINKIN: You did say it was wrong, too, but  
3 I think you also said that it would not be a matter of --

4 MR. GUTTERMAN: Mr. Chairman, it's Applicants  
5 position that the fact that the NRC staff reviewed the  
6 Quadrex findings and concluded that the findings were not  
7 reportable whether right or wrong, shows that the fact  
8 that the Applicant similarly concluded they were not  
9 reportable did not reflect adversely on Applicants'  
10 character and competence. And I think to make that  
11 point, Applicants ought to be able to get into evidence  
12 this particular staff review of the reportability of the  
13 Quadrex findings.

14 MR. SINKIN: I disagree, Mr. Chairman, because  
15 we were in the process of attempting to respond to the  
16 categorizations, which we wanted discovery on how they  
17 were performed, and the Board ruled that since they were  
18 not going to rely on this document in any way, there was  
19 no reason for us to have discovery or to explore it any  
20 further.

21 MR. GUTTERMAN: Mr. Chairman, this document is  
22 specifically referenced in the testimony.

23 MR. SINKIN: Fine, we'll move to strike the  
24 reference in the testimony.

25 MR. GUTTERMAN: This comes too late, Mr.

1 Chairman. CCANP's examination has already been  
2 completed.

3 MR. SINKIN: Well, on my --

4 MR. GUTTERMAN: I think the facts of the review  
5 and the outcome of the review are clearly relevant and  
6 material to the issues before this board.

7 JUDGE BECHHOEFER: What's the Staff's position.

8 MR. REIS: Leaving aside the correctness of the  
9 review, certainly it is very, very probative of Houston  
10 Lighting & Power's character and competence that the  
11 Staff, at least the staff of Region IV, came to the same  
12 conclusion. It will be the Staff's position in its brief  
13 later that no matter even if there were errors made, the  
14 fact that a reputable region of the NRC came to the same  
15 conclusion, you certainly could not hold it against the  
16 Applicants for coming to the same type of conclusions.

17 MR. SINKIN: Well, Mr. Chairman, we would say  
18 that the only thing this document goes to is the  
19 competence of the Staff of Region IV and whether they're  
20 reputable or not will be known soon I'm sure. But we  
21 don't think it has any relevance to this proceeding.

22 JUDGE BECHHOEFER: I think we'll overrule the  
23 objections. I think all of this will go -- well, I  
24 assume there was an objection to your question.

25 MR. GUTTERMAN: There was.



1 MR. SINKIN: There is an objection, Mr.  
2 Chairman and part of the basis is we were not given  
3 discovery on how the Staff developed their  
4 categorizations to make their determinations of what was  
5 reportable around what was not reportable so that will  
6 stand as parts of the objection if it does come into  
7 evidence.

8 JUDGE BECHHOEFER: Well, I'm not sure the last  
9 is relevant. For the purpose that it will be used for.

10 MR. GUTTERMAN: Thank you, Mr. Chairman. Let  
11 me start my question.

12 JUDGE BECHHOEFER: We're overruling the  
13 objection. You can ask the question.

14 Q (By Mr. Gutterman) the question I started to  
15 ask was referring, Mr. Johnson, to Page 8 of the  
16 memorandum, section five, entitled "Reportability of  
17 Individual Quadrex Items," does that section five  
18 accurately describe the results of the review, the review  
19 conducted by Region IV of the reportability of the  
20 Quadrex findings and the results thereof as of August  
21 24th, 1984?

22 A (By Mr. Johnson) Yes, that section five was  
23 prepared by the Region IV staff.

24 Q So taken together, the section five of that  
25 memorandum and the enclosure, describe Region IV's review

1 of these particular Quadrex findings for reportability?

2 A Yes, the review was done in the -- prior to  
3 this August 24th, just prior to that, using against 10  
4 CFR 50 55(e), and what we saw in the Quadrex report.

5 MR. GUTTERMAN: Mr. Chairman, I move that  
6 Applicants' Exhibit 77 be admitted into evidence.

7 MR. SINKIN: Objection.

8 MR. REIS: No objection.

9 MR. SINKIN: For all the basis stated that the  
10 question shouldn't be asked, the document shouldn't come  
11 in either.

12 Mr. Chairman, I would point to the Board's  
13 February 26th, 1985 order at page 29, where it  
14 states: "With respect to further discovery, we wish to  
15 stress that the main subject which CCANP wishes to pursue  
16 is the Staff's decision making process with respect to  
17 reportability of Quadrex findings under 10 CFR 50 55(e).  
18 We stated earlier and we repeat, that the Staff's  
19 procedures are not relevant to HL&P's character and  
20 competence. Beyond that, as set forth below, we are  
21 placing no reliance in determining reportability of  
22 Quadrex report items on the analysis set forth in the  
23 Staff's August 24th, 1984 brief." So obviously we were  
24 not on notice that this document would be litigated; we  
25 were on notice that it was irrelevant; that we were



1 denied discovery on that basis.

2 JUDGE BECHHOEFER: The Board will admit this  
3 document, but we want to note that it's basically for the  
4 conclusion it reached, not to the internal procedures  
5 that were used to reach that. Insofar as it's relevant  
6 to this proceeding, it could bear -- I don't say it does --  
7 but it could bear on the Applicants' character.

8 MR. SINKIN: Mr. Chairman, I can since the  
9 document has been document admitted, copies should be  
10 distributed to the parties just as any other document  
11 introduced late in the hearing.

12 MR. GUTTERMAN: Mr. Chairman, copies have been  
13 distributed to the parties.

14 MR. SINKIN: The parties were not on NOTICE  
15 this was coming into evidence as an exhibit as we were on  
16 all the other items FOR which we didn't have to bring  
17 copies -- you didn't have to distribute copies. When you  
18 introduce them in iddle of the hearing, you distribute  
19 copies.

20 MR. GUTTERMAN: Mr. Chairman, we can make an  
21 extra copy for CCANP if they're anxious to have an extra  
22 copy but I think the point is not well taken because the  
23 Staff had said originally that they were going to  
24 introduce the documents discussed in their testimony and  
25 they overlooked this one, and we're just filling the gap

1 of an oversight. But if CCANP wants another copy of this  
2 document, we will get one at the first opportunity or we  
3 can give one of the reporter's copies to CCANP and make  
4 another copy for the reporter.

5 JUDGE BECHHOEFER: Do you have the copies for  
6 the reporter?

7 MR. GUTTERMAN: Yes.

8 MR. REIS: Why don't we just to move things  
9 along, the Board will take one --

10 MR. GUTTERMAN: In fact, we can give CCANP the  
11 copy that I gave to the witness to examine.

12 JUDGE BECHHOEFER: The Board at least, I have a  
13 copy. You don't have to -- we have other copies back in  
14 our offices.

15 We will admit the document, Applicants' Exhibit  
16 77.

17 (Applicants' Exhibit No. 77  
18 received in evidence.)

19 MR. GUTTERMAN: Now I'd like to mark and show  
20 to the witness a document that will be Applicants'  
21 Exhibit 78.

22 (Applicants' Exhibit No. 78  
23 marked for identification.)

24 Q (By Mr. Gutterman) Applicants Exhibit 78 is a  
25 November 23, 1984 letter, from Mr. E.L. Johnson, Chief

1 Reactor Project Branch I, NRC Region IV, to Houston  
2 Lighting & Power Company, I believe it's what you might  
3 call I&E 84-12 on the South Texas Project. Is that  
4 correct, Mr. Johnson

5 A (By Mr. Johnson) That would be Region IV  
6 inspection report 84-12. Since the regions have become  
7 independent offices, it's an NRC inspection report.

8 Q Referring you to Page 5 of the inspection  
9 report, the discussion that begins at the bottom of  
10 that page where it says: "(Closed) Violation  
11 (498/499-8202-01)."

12 In that discussion, does the Region IV consider  
13 the response of Houston Lighting & Power to the notice of  
14 violation that came out of I&E report 82-02 and closed  
15 that violation?

16 A Yes. This particular section of the report  
17 starting at the bottom of Page 5 and continuing about  
18 three quarters of the way down page six is the follow-up  
19 action taken on the notice of violation that was issued  
20 from the results of inspection 82-02, which was a  
21 responded to by HL&P. We found the corrective action  
22 that they proposed in their response satisfactory and  
23 this then verifies the implementation of that corrective  
24 action.

25 Q And does that paragraph accurately reflect

1 Region IV's review of that response?

2 A It reflects Region IV's review of the  
3 implementation of the response made by HL&P, yes.

4 MR. GUTTERMAN: I move that Applicants' Exhibit  
5 78 be admitted into evidence.

6 MR. REIS: The staff has no objection, as  
7 limited to that one section of the report appearing on  
8 pages five and six.

9 MR. SINKIN: No objection, with the same as the  
10 Staff.

11 JUDGE BECHHOEFER: The Board will admit  
12 Applicants' Exhibit 78 on that basis. The portions on  
13 page five and six about which the witnesses were  
14 questioned, together with any identifying details to show  
15 what the document is.

16 (Applicants' Exhibit No. 78  
17 received in evidence.)

18 MR. GUTTERMAN: That completes Applicants'  
19 cross-examination.

20 BOARD EXAMINATION

21 By Judge Shon:

22 Q I just had a few minor questions. One is a  
23 matter covered in Mr. Taylor's testimony, briefly  
24 mentioned at page 23, it's the the cooling pond sizing  
25 matter. And it's discussed a little bit more fully on

1 page 44. We have heard testimony from Applicants'  
2 witnesses concerning this matter, also, at least one of  
3 their witnesses expressed the view that the thing wasn't  
4 really a safety matter at all, since the condition that  
5 hadn't been analyzed was for both plants shutdown and  
6 even under those circumstances, even if the tech spec  
7 governing the temperature of the pond were violated, no  
8 safety problem would ensue because if you violate a tech  
9 spec of that sort all you're obligated to do is shut down  
10 anyway and they'd already be shutdown, so that there was  
11 no way in which this could really result in a safety  
12 problem. What do you think of that reasoning?

13 A (By Mr. Taylor) As far as it goes, it's  
14 acceptable. But there is one limiting function. If that  
15 temperature in the pond were to rise so high as an  
16 example, to prevent adequate cooling, to some of the  
17 service that is that service water is providing, that  
18 would be a detriment in that condition. I think what  
19 we're really talking about is not both units shutdown but  
20 both units in the process of shutting down; when you're  
21 rejecting massive amounts of heat. So if that  
22 temperature were to rise well above the qualified level  
23 of certain pieces of equipment, and I'd pick out a pump  
24 as an example, where you're supplying cooling water to  
25 bearing surfaces, if that temperature were to rise so



1 high that the bearings expand into a point of abrading on  
2 each other, that then the pump would stall out then  
3 you've lost certain service.

4 Q The other question that I wanted to ask Mr.  
5 Taylor has to do with his testimony at Page 4, concerning  
6 ANSI N-45.2.11, it developed rather late in Mr. Sinkin's  
7 cross-examination of the panel that no one really knew  
8 whether or not the plant was committed to using this  
9 particular standard.

10 If it were not, would that in any way affect  
11 the conclusions that you reach in your testimony  
12 regarding reportability?

13 A (By Mr. Johnson) I'll take that question, sir.  
14 I did a little research. The FSAR, ANSI N-45.2.11 is  
15 such a common standard that's the one we immediately went  
16 to and HL&P is committed to ANSI N-45.2.11, 1976,  
17 according to their FSAR, with some -- there are some  
18 minor exceptions explained in detail in the FSAR and  
19 therefore it was an appropriate one, it was just one of  
20 those things that we grabbed the standard that everybody  
21 uses and you know just made the gross assumption that  
22 they also use it.

23 Even if they didn't, it's a good guideline for  
24 the review that Mr. Taylor's was asked to conduct. But  
25 they are committed to it.

1 JUDGE SHON: I see. Thank you, that's all.

2 Q (By Judge Lamb) I have a few questions  
3 concerning -- did you have something.

4 A (By Mr. Johnson) He just had my ear for a  
5 moment.

6 Q I have a few questions regarding some issues  
7 that the Board has to resolve. And I would like to make  
8 certain although some of you have addressed some of these  
9 in your testimony. That I would like to be certain that  
10 we get all the information from the individual members of  
11 the panel that we can which might be helpful.

12 First of all, with respect to whether the  
13 Quadrex report should have been reported in its entirety,  
14 back in May of 1981, does any member -- one of you at  
15 least have addressed this already in your testimony.  
16 What I want to find out is whether or not any of other  
17 members of the panel could address that.

18 A (By Mr. Taylor) I already addressed it; now  
19 you do it.

20 A (By Mr. Johnson) Mr. Constable and I, I think  
21 we touched on that in some of our testimony.

22 A (By Mr. Constable) Yes, we touched on it in  
23 our testimony. We don't think this was reportable as a  
24 whole document, and so state.

25 A (By Mr. Johnson) The thing you have to get to



1 there to report the whole thing, you would be saying that  
2 it represents -- that there's a deficiency in there and  
3 it represents, for example, significant breakdown in  
4 quality assurance program. And as I pointed out  
5 yesterday, the entire tenor of 50.55(e) starts with  
6 something is wrong in the plant that's going to affect  
7 safe operation, adversely affect the safe operation down  
8 the road, or could, if left uncorrected.

9           Given that then, you have a set of criteria  
10 that you look at that deficiency against to see does this  
11 deficiency then represent a broader root cause, a  
12 breakdown in QA, faulty design process, such that that  
13 design process or that breakdown in QA are going to cause  
14 other problems to occur. If you have several reportable  
15 items in this report and having examined them, you  
16 discover that they're from diverse causes, they don't  
17 suggest this common thread, then our conclusion was that  
18 the report is not reportable under the way 50.55(e) is  
19 written and the way that we interpreted it and the way  
20 that I&E headquarters has desired that we interpret it.

21           Q     Then you do not feel that it represented a  
22 whole or in part a QA breakdown --

23           A     That's right, yes, sir.

24           Q     -- if I'm interpreting your statement  
25 correctly. You agree with that Mr. Constable?

1 A (By Mr. Constable) Yes.

2 A (By Mr. Taylor) Clearly I have already.

3 Q Mr. Hieshman, do you have a view on that?

4 A (By Mr. Heishman) I cannot respond on that,  
5 Judge Lamb, in that I have not reviewed the report.

6 Q I would just like to check with each of you as  
7 to the period of time and the degree of involvement which  
8 you have had with the South Texas Project. Could you  
9 give me a thumbnail sketch of how much involvement you've  
10 had other than that stated with respect to the Quadrex  
11 report?

12 A (By Mr. Johnson) Starting with myself, the my  
13 involvement peripherally with South Texas, with the  
14 Quadrex issue, I was the enforcement officer in the 1982  
15 time frame when we were writing, early 1982, when we were  
16 writing the NUREG document; then as a matter of fact,  
17 report 82-02, the investigation, I was the director of  
18 the enforcement investigation staff, Mr. Driskill, who  
19 was the investigator assigned to work for me; in October  
20 of -- in mid-'83, I became the assistant to Mr.  
21 Gagliardo, who was the division director over all the  
22 reactor projects. And in October of '83 I became the  
23 branch chief and had South Texas Project under one of my  
24 section chiefs.

25 A (By Mr. Constable) My involvement with the

1 South Texas Project really began when I was selected as  
2 section chief on May the 2nd of this year, so it's a very  
3 short period of time. The facility was in the section  
4 that the facility I was working on was, that is Waterford  
5 and South Texas were under the same section chief. And  
6 so I would hear things from time to time but essentially  
7 nothing. My involvement strictly is based on the fact  
8 that I became section chief, we had a job to do and I had  
9 a background in dealing with 50.55(e) problems and this  
10 kind of thing at Waterford. And I brought that to the  
11 task that we had at hand.

12 Q Thank you, Mr. Taylor.

13 A (By Mr. Taylor) I was what the NRC refers to  
14 as the project inspector, the lead inspector for the  
15 South Texas Project in it's very early stages of  
16 construction. From the beginning of roughly 1976 until  
17 the end of 1977, conducted something on the order of off  
18 the top of my head, roughly 20 inspections there.

19 Q Is that continued in recent years?

20 A No, sir, at the end -- beginning of 1978, I had  
21 the fortune or misfortune depending on your point of view  
22 of going to Comanche Peak for something like six years,  
23 with total disconnect from South Texas. It was only in  
24 June when this Quadrex review project was assigned to me  
25 that I became reinvolved with it.

1 Q Mr. Heishman.

2 A (By Mr. Heishman) I have had no direct  
3 involvement with the facility. I testified yesterday  
4 about providing some resources to do some review of the  
5 Quadrex report but had no direct involvement in that. In  
6 a previous assignment as a branch chief in Region III,  
7 some of the people from my branch were a part of a task  
8 force that did some extended inspection at South Texas  
9 and I don't remember the exact time frame for that. But  
10 it was back in the early '80's. But I again had no  
11 direct involvement other than providing resources.

12 Q Now, we have other people coming who can  
13 respond to this, but what I'm looking for is any  
14 information, any of the panel members feel that they  
15 could give us or share with us concerning the competence  
16 of Houston Lighting & Power over the past, any changes or  
17 seen their competence over the past several years.

18 MR. SINKIN: If I might, I hate to interrupt  
19 the Board question, but it seems clear to me this Board  
20 was -- this panel was not called on the issue of the  
21 current competence of HL&P. And if that issue is being  
22 opened by this Board question, I think we're  
23 substantially expanding the purpose of this panel.

24 A (By Mr. Johnson) It's right here in the  
25 testimony.

1 MR. SINKIN: Mr. Chairman, I'm sorry, I've just --  
2 there's a question and answer here about the 1983 SALP  
3 report, so apparently these guys are here to testify  
4 about the current competence. We may be here until  
5 Tuesday with them.

6 JUDGE LAMB: I think this does go a little  
7 beyond our purpose here so I'm going to withdraw that  
8 question.

9 MR. AXELRAD: Dr. Lamb -- never mind.

10 JUDGE BECHHOEFER: It does appear that next  
11 week's panel can answer that same question.

12 MR. PIRFO: Simply note for the record that the  
13 next weeks panel report to Messrs. Constable and Johnson.  
14 So to that extent, they are competent to testify to that.  
15 But the in terms of any details, of course, next week's  
16 panel is the appropriate panel to deliver the questions  
17 to.

18 JUDGE LAMB: I'll move on to a little different  
19 area.

20 Q (By Judge Lamb) Does any member of the panel  
21 have any reason to believe that HL&P attempted to conceal  
22 the Quadrex report from the NRC or from this Board at any  
23 time during the '81 period?

24 A (By Mr. Hieshman) I have no knowledge of that.

25 A (By Mr. Johnson) Since I was involved in 82-02



1 as the supervisor for the investigator and had  
2 discussions with them and signed off on that report, I  
3 think the conclusion there was generally no. Further to  
4 that, I don't believe it -- based on again my experience  
5 in that supervisor of the investigators and in pursuing  
6 allegations that other NTUL plants, it would be  
7 impossible, practically impossible, for HL&P to conceal a  
8 report of that magnitude.

9 If it were a single page memo from some  
10 contractor who made some observation that was damning,  
11 perhaps that could have been slipped away in the files  
12 and all. But not something like that, of that  
13 importance.

14 It's going to come out, as it did, as we  
15 started -- as we opened it up, we may not have known it  
16 was Quadrex, but we knew there was something and so we  
17 said "Give me this thing," and, "Here it is, okay."

18 And so I think there -- that it would be an  
19 impossibility for that to have occurred.

20 Q Well I'm interested in whether there was any  
21 attempt to.

22 A I don't get any indication that there was an  
23 attempt to do so.

24 Q Mr. Taylor?.

25 A (By Mr. Taylor) I really can't say, sir. I

1 wasn't involved.

2 Q Mr. Constable?

3 A (By Mr. Constable) What I know is just from  
4 talking to the individuals involved at the time. And I  
5 can't say that they perceived it as an attempt to  
6 withhold it, I think that Mr. Phillips was a little upset  
7 that they couldn't give it to him right away at the time  
8 that this was discussed in the investigation and in other  
9 places. I really don't know more about it than that.

10 JUDGE LAMB: That's all I have.

11 Q (By Judge Bechhoefer) Mr. Johnson and/or  
12 Constable, I'd like a little more description of how  
13 Region IV expects the -- well so-called 14 day guideline,  
14 14 day provision which appears in the April 1st, 1980  
15 guideline, how that is or should be applied by an  
16 applicant? It's referred to on page six of your  
17 testimony in general.

18 A (By Mr. Johnson) Sir, the typical process for  
19 a utility to follow and this is very similar to the --  
20 almost identical to the process that Bechtel is using and  
21 I'll slip in the part where HL&P gets involved in that,  
22 and almost every other utility, there may be different  
23 terminology, but I use kind of generics, start with the  
24 identification of what appears to be a non-conforming  
25 condition, what appears to be a problem; that's



1 identified by engineers craftsman QC inspectors, whatever  
2 source; someone walking through the plant and, you know,  
3 a hanger is dangling, you know, that looks like a problem  
4 to them so they write up a non-conformance report.

5 Over the lifetime of the plant's construction  
6 activities, that can be thousands and thousands and  
7 thousands. Depends on again how they're used; there can  
8 be 10,000 easily. On a very quick turn around, a couple  
9 of day basis, these reports are screened by a staff,  
10 usually one or two dedicated people so that you have  
11 consistency in looking at these things. And they use a  
12 rather broad guidelines, something that would ensure that  
13 all possible items are passed to the next evaluation  
14 level and the truly trivial ones are then processed as  
15 normal NCR's and dispositioned and filed away as quality  
16 records.

17 The ones that pass that initial quick screening  
18 go on to an evaluation board and that's where the, you  
19 know, about this 14 day process of evaluating it comes  
20 in. That board or whatever group they use, the  
21 evaluation group, consists of the various engineering  
22 disciplines, you know, some relatively experienced  
23 people.

24 If after 14 days, they haven't made the  
25 determination it's not reportable, they pass it along to

1 the utility and within 24 hours, the utility then causes  
2 that to be reported as a potentially reportable item.  
3 Further evaluation may drop some of those back into the  
4 category of not reportable and then they'll be  
5 dispositioned as normal non-conformance reports.

6 The utility, in this case, HL&P has a direct  
7 input to their, I guess we're calling it the incident  
8 review committee, the one that reacts within that 24 hour  
9 period, a direct input with their own form the DEF.

10 And in that regard then they take that same 24  
11 hour period and make the report. What we've found is as  
12 I point out in the testimony, about one third to two  
13 thirds of all items that are reported to to NRC as  
14 potentially reportable items end up being truly  
15 reportable; the others are not reports I believe. But  
16 the mechanism provides the NRC with the information early  
17 and it causes us to have to deal with some issues that  
18 are not reportable that we wouldn't have had to deal with  
19 had we allowed that evaluation process to be a long one,  
20 two months long. But that is a necessary expense and  
21 we're willing to take that because we do get the problem  
22 surfaced early, and can then deal with them promptly.

23 (No hiatus.)  
24  
25

1 Q Do you have anything to add, Mr. --

2 A (By Mr. Constable) Just a little. You should  
3 know and understand, I think you do, that we inspect  
4 that process all the way along the line. The fourteen  
5 days is not a magic number, it's guidelines. The intent  
6 is to cause the utility to not, you know, sit on things,  
7 you know, to infinity so that we get decisions made and  
8 things reported to us.

9 But, you know, if they have to report it  
10 before they've completely done their study, they just  
11 have to make a decision based on what they have in their  
12 hands at the time. Later on they may get more  
13 information and then decide that something is reported  
14 that early on they didn't really know whether it was  
15 reportable or not. It is guidelines.

16 A (By Mr. Johnson) I will add to that the  
17 inspections that are performed, we follow up on every  
18 reportable item and close it out in an inspection  
19 report. The ones that are withdrawn as being  
20 non-reportable, even though they were initially  
21 potentially reportable, we follow up on a sampling of  
22 those. Generally we'll scan the ones that look  
23 interesting. We'll sample those packages and track back  
24 through the records to satisfy ourselves that the  
25 licensee is applying an appropriate engineering

1 judgment.

2 Since the whole determination of reportability  
3 revolves around informed judgment, we want to see -- we  
4 want to try to get a feel is that judgment similar to  
5 what our judgment would be.

6 Q Mr. Heishman, do you have any additional  
7 views?

8 A (By Mr. Heishman) No, sir. I think that --  
9 Mr. Johnson testified yesterday, I believe, that the  
10 potentially reportable subject was created in order to  
11 try to address the problems associated with how do you  
12 evaluate within twenty-four hours whether or not  
13 something is reportable. And, so, that whole system was  
14 added to the guidance in 1980 in order to try to provide  
15 a mechanism whereby that process could be better handled  
16 and not unduly bog down the system with trivia reporting  
17 and still get the kind of information within a time  
18 frame to where it's useful with our understanding of the  
19 intent of the law -- or the rule, excuse me.

20 Q Now, do any of you think that the Quadrex  
21 report as a whole should have been put through that  
22 general procedure, making a potentially reportable  
23 report and then withdrawing most of it later on?

24 MR. AXELRAD: Mr. Chairman, I didn't hear half  
25 the question. Could you repeat it, please?

1 JUDGE BECHHOEFER: I hope so. I said do any  
2 of the panel members think that the Quadrex report as a  
3 whole should have been put through the procedure where  
4 it would have been sent in as potentially reportable and  
5 then subject to further study, item by item various  
6 items withdrawn that were found not to be reportable.

7 A (By Mr. Heishman) I have not reviewed the  
8 report, sir, so I cannot reply to that.

9 Q (By Judge Bechhoefer) Mr. Johnson?

10 A (By Mr. Johnson) I don't believe it would  
11 have served us any different purpose than what we  
12 already arrived at. It would have --

13 First of all, we determined -- our own review  
14 satisfied ourselves that the thing was not reportable  
15 under 50.55(e). We certainly do not want to be burdened  
16 with infinite trivia in reporting. You know, we can't  
17 handle -- we have to have some threshold. We're very  
18 limited in resources. We want to focus on that which is  
19 important.

20 We would have -- as we have done, we would  
21 have followed up on the utility's actions for such an  
22 audit. It is certainly interesting, in the first  
23 reading you get -- you know, you get a flavor that, gee,  
24 this is an important document, which we did. We  
25 followed up on the Bechtel review. It would have been



1 not much different in scope. It would have been  
2 different in style had this not been the subject of, you  
3 know, the Board hearings, had this been a more routine  
4 document that didn't have such notoriety.

5 But, no, sir, I don't believe that it would  
6 have served us any useful purpose to have it as a  
7 potentially reportable item.

8 Q I'm not sure you're the right panel to ask and  
9 if you're not, let me know. But do you, any of you  
10 believe that something like the fourteen-day guidelines  
11 should be written into a utility's internal procedures?

12 MR. REIS: Mr. Chairman, I'm going to object  
13 to that. You're asking them what their view is on what  
14 future rule making should be. I think the Commission  
15 has --

16 JUDGE BECHHOEFER: I didn't ask that. That's  
17 not the question. It has nothing to do with future rule  
18 making.

19 MR. REIS: I understand it that way.

20 JUDGE BECHHOEFER: This is guidelines and many  
21 times utilities write guidelines into their internal  
22 procedures and I'm just asking them whether procedure  
23 PLP-02 does not include a --

24 MR. REIS: Okay. I'll withdraw the  
25 objection.

1 JUDGE BECHHOEFER: The witnesses had testified  
2 that they had instruction sessions, training sessions  
3 and I just wanted to see if this panel --

4 MR. GUTTERMAN: Mr. Chairman, as I understand  
5 what the Board's asking, it's would it be preferable  
6 instead of the way the HL&P procedure is written where  
7 it says that these reviews shall be done promptly that  
8 the procedures specifically say that they should be done  
9 within fourteen days?

10 JUDGE BECHHOEFER: Or within some specified  
11 days. Fourteen days is a guideline. That's where I was  
12 driving.

13 MR. REIS: I'm sorry. I didn't understand the  
14 question.

15 JUDGE BECHHOEFER: I'm not sure it's this  
16 panel or the next panel.

17 MR. PIRFO: I don't have a problem with the  
18 question. I don't think this is the panel to ask.

19 JUDGE BECHHOEFER: That's what I'm not sure.  
20 There is some overlap and this panel certainly seems to  
21 know a low lot about the fourteen-day guideline  
22 provision, so --

23 MR. PIRFO: Go ahead.

24 A (By Mr. Johnson) Yeah, we have examined  
25 exactly the process and the procedures that are in use



1 at South Texas. I discussed them at length with Mr.  
2 Garrison who we asked to go do the inspection. The  
3 Bechtel procedures do specify those stages of quick  
4 review and, you know, quick screening to screen out the  
5 obvious trivia, pass it on to the evaluation. There are  
6 specified time periods in there. Then it drops down  
7 into the HL&P system.

8 I think the HL&P part of it is more  
9 restrictive on them than we would have demanded  
10 according to those guidelines. But the input directly  
11 to the HL&P side from their own people is far less than  
12 you get from the Ebasco, the contractor, the  
13 engineering, you know. That's where 90 percent of all  
14 of the potentially reportable items are going to flow  
15 through that chain and that does have a Bechtel  
16 procedure that's pretty standard. Bechtel is using it  
17 on all their nuclear projects. It specifies the level  
18 of review and the time period, you know, when those  
19 things have to kick through the system and drop into the  
20 utility's lap. So, it's a controlled process in that  
21 regard.

22 Q (By Judge Bechhoefer) And you have no problem  
23 that this procedure, PLP-02, I think uses just the term  
24 "promptly," you have no problem with that I take it?

25 A The implementing procedures on the Bechtel

1 side provide for the appropriate level of evaluation in  
2 a timely manner. And I don't remember whether it's  
3 fourteen days or ten days or fifteen days, but it's a  
4 fixed period of limited time to give it an initial  
5 appropriate level evaluation.

6 Q Was or is the Staff, any of you can answer  
7 this, generally satisfied with the level of  
8 documentation of the Quadrex review that HL&P kept or  
9 had in its files?

10 A I haven't examined the level of documentation  
11 in the review that was conducted back in August,  
12 whatever the conclusions may be drawn from that. I can  
13 say that that review satisfied the Region IV staff that  
14 there was sufficient documentation. They could track  
15 back through the process, there were packages of quality  
16 records that allowed us to reconstruct for our own  
17 purposes to make our decision on reportability.

18 Q I see.

19 There is some testimony by the HL&P officials  
20 that said that they were not able precisely to remember  
21 exactly the reasons assigned for not reporting certain  
22 items.

23 A Yeah, I won't say that -- and I --

24 Q They did reconstruct some reasons.

25 A Yeah. I don't think that any of that

1 documentation had clear disclaimer documents. You know,  
2 this is the basis upon which I decided it was not  
3 reportable. But the underlying, you know, documents,  
4 the engineering calculation that you'd have to go to  
5 this file for and, you know, some other supporting piece  
6 of paper, that all exists because those are all quality  
7 records, they're required to be maintained.

8           So, the record is there, but it -- and we  
9 don't require licensees to -- for those items that they  
10 decide not to report even as potentially reportable  
11 items, we don't require them to say why we didn't do  
12 it. They would disposition that piece of paper and you  
13 could track back through that entire record from the  
14 time the nonconforming condition was first identified  
15 till when it's finally closed out.

16           Q     You do not require a group, for instance, like  
17 the IRC to maintain records of all of those items I take  
18 it?

19           A     For those items that they decide are  
20 potentially reportable and then end up being reportable,  
21 we require, you know, obviously complete records. For  
22 those that are made potentially reportable and then  
23 later withdrawn, as I say, we -- as a matter of fact,  
24 it's been an active subject of discussion over the past  
25 I guess a year or more that we want the utility to give

1 us a short -- when they withdraw the item saying, you  
2 know, declaring that it's not reportable, we want to --  
3 that initial letter to us or that letter that we'll  
4 withdraw it to give some basis for it. We can -- you  
5 know, we can be initially satisfied.

6 Later on we're going to go and we're going to  
7 sample that thought process as I indicated before in our  
8 inspection program. But initially to look at it to say  
9 yes, it's reasonable or do I see some fault here that I  
10 ought to be getting on the phone to them and saying no,  
11 I'm not satisfied with your reasoning, you know, let's  
12 get together and talk about it.

13 Q What about records of items considered by a  
14 group like the IRC or the IRC in this case, records of  
15 items that the group considers it determines are not  
16 reportable or not potentially reportable, internal  
17 records of that sort. Does the Staff expect -- or what  
18 does the Staff expect in that regard?

19 A To the extent that those do represent  
20 deficiencies in the plant, they have to be  
21 dispositioned, there will be quality documentation.  
22 Could I go and could I track, pick up an NCR and get an  
23 indication that that went to the IRC. I'm not that  
24 familiar with their internal process. There is indeed a  
25 possibility.

1           We're sampling NCR's and observing that  
2 process. Anything that gets to that IRC is either in  
3 the form of an NCR or a deficiency evaluation form, the  
4 DEF, it's just an NCR by another name, those are  
5 available, we do sample those. We don't require that  
6 they maintain those kind -- that level of record that  
7 would say I looked at this deficiency evaluation form  
8 and I have decided it's not reportable for these  
9 reasons. So, that's not part of the -- of our  
10 requirements and I'm not sure whether they do that and  
11 apparently they don't. But that doesn't give us  
12 difficulty because we're going to sample the base  
13 document.

14           Q     Now, would you have liked or would you have  
15 expected maybe a deficiency form or something equivalent  
16 because they didn't have it in 1981, but would you have  
17 expected or desired records for each Quadrex item of  
18 that sort that was not reported?

19           MR. REIS: I can't -- I'm sorry, Mr. Chairman,  
20 I didn't hear the end of the question.

21           JUDGE BECHHOEFER: I'm sorry. Each item that  
22 would be determined to be not reportable, would the  
23 gentlemen have liked records of that sort.

24           Q     (By Judge Bechhoefer) Mr. Taylor can answer  
25 too, I'm not --



1           A        (By Mr. Johnson) Yeah, I want him to leap in  
2 on this. But I'll give you an acceptable alternative as  
3 from the perspective of the NRC manager.

4                    Had HL&P called us up and said, look, we've  
5 just completed a significant audit of our engineering  
6 process. There are a lot of findings that need to be  
7 looked into and I'm going to run it through the normal  
8 process, my IRC, and that's going to take us six weeks.  
9 I just want to let you know. And that would, you know,  
10 kind of turn us off from going and writing traffic  
11 tickets, you know, you didn't do this in twenty-four,  
12 you didn't do that.

13                   The same end result would have occurred. You  
14 know, they would have had several potentially reportable  
15 items which were then, you know, determined to be  
16 reportable, the others would have been non-reportable.  
17 It would have been acceptable as an alternative to us.

18                   If HL&P looked at the thing differently and  
19 they said we've got to live up to our requirements to do  
20 a prompt review of this thing in twenty-four hours and  
21 then did it that way. I think we would have found  
22 either one totally acceptable.

23                   Bob?

24           A        (By Mr. Taylor) I think that Mr. Johnson's  
25 already said that we sample nonconformance reports,

1     audit deficiency records, DEF's, DER's, whatever title  
2     the document represents a reported deficiency. I would  
3     review the Quadrex questions, the Brown & Root answers  
4     and the Quadrex assessments in the same nature, that in  
5     reality they are deficiency reports. We've sampled the  
6     deficiency reports. Now, we make an independent  
7     judgment as to whether they should or should not, but  
8     the document exists to make that judgment by.

9           Q     (By Judge Bechhoefer) You think there was  
10    enough documentation of the non-reported items of the  
11    Quadrex report so that the Staff could make its  
12    judgment?

13           A     Absolutely.

14           Q     I believe one of you gentlemen or all of you  
15    stated that you would have -- it would have been nice or  
16    desirable if the company had called Region IV rather  
17    than Mr. Sells. Or maybe not rather than, but in  
18    addition to Mr. Sells.

19                   Can you give me some elaboration of your  
20    reasoning? Was this just a matter of a comity, more or  
21    less? I know you all say there was no requirement.

22           A     (By Mr. Johnson) I believe it would have been  
23    comity.

24                   The NRR at the stage of licensing that the  
25    utility, HL&P, was in, NRR is the organization that

1 examines the design and the acceptability through the  
2 FSAR, I think it would have been natural for them to  
3 turn to them. The utilities only late in the licensing  
4 process come to realize that the real regulatory body  
5 that they have to deal with is the office of inspection  
6 enforcement, now NRC Region IV, because we're going to  
7 be around with them for forty years day in, day out.  
8 They'll only be talking to their project manager on a  
9 weekly basis. But they saw us as the inspection force,  
10 interested in the implementation, the piping erection  
11 and, you know, the proper welding and the QC records and  
12 not the design things.

13 So, I think they turn naturally to NRR on  
14 that. We certainly want to be remembered in their  
15 thoughts. I certainly think they understand that now.

16 Q My last question, Mr. Johnson and Constable.  
17 You have stated you agree with the testimony of Mr.  
18 Taylor. Does that agreement include the matter of the  
19 two or three items that Mr. Taylor thought should have  
20 been potentially reportable but were not but were not  
21 actually reported?

22 A Those items where he said, you know, from my  
23 perspective it's an awful close call, I might have made  
24 them potentially reportable and they eventually turned  
25 out to be not reportable.

1           Yeah, we talked -- I, you know, probed his  
2           thought process on it because I wanted to understand and  
3           I think that it's a matter of that informed judgment.

4           An awful lot of -- a lot of the time, we, the  
5           NRC, obviously takes a conservative, the most  
6           conservative stand on issues. I think we have to when  
7           there is a judgment to be made. I think the utility  
8           tries to take at least as conservative a thing because  
9           they know if they make the wrong choice, that we're  
10          going to come down with enforcement on them. There's  
11          going to be close calls like that.

12          And, so, I agree that, yeah, from what the  
13          Quadrex has, you know, as I questioned Mr. Taylor about  
14          it, that those were pretty close calls, the utility made  
15          ultimately the right decision based on what we saw  
16          there. We might have, you know -- another view of it  
17          might have resulted in calling it potentially  
18          reportable. It ended up being not reportable; hence,  
19          you know, ultimately the decision was the right one.

20          I think it demonstrates the latitude that you  
21          can get into on these things. There's a box, we hope  
22          it's not very big, but there is some space in there for  
23          what's a deficiency and what's reportable and what's  
24          significant.

25          Q       I take it there's no very practical way of

1 defining a threshold that everybody could come up with  
2 exactly the same answer?

3 A No, sir. We have meetings with the same  
4 utility, we will have a series of meetings over the life  
5 of the inspection process to discuss reportability to  
6 continue to make sure we understand their thought  
7 process and they understand our requirements.

8 A (By Mr. Heishman) I might add that I've  
9 struggled with that in my current assignment for the  
10 last four years and prior to that as a regional manager  
11 of trying to figure out some way to make it easier for  
12 all of us to do the same thing under given sets of  
13 circumstances and I have not been able to do so.

14 So, I think it is -- I think you characterized  
15 it properly when you said I don't know of any easy way  
16 to do it. We've tried several different sets of  
17 guidance, the latest the one we were discussing at the  
18 present time, and there still is a lot of room for  
19 judgment. And I guess in reality the nature of what it  
20 is we're trying to deal with requires that informed  
21 judgment and we do have those kind of people utilizing  
22 it and exercising that judgment. So, on that basis I  
23 think we're not too bad off.

24 Q Anyone else want to comment on that?

25 JUDGE BECHHOEFER: That's my last question.



1 Mr. Pirfo or Reis?

2 MR. REIS: Mr. Pirfo.

3 MR. PIRFO: I would like a couple minutes for  
4 redirect.

5 JUDGE BECHHOEFER: Okay.

6

7 REDIRECT EXAMINATION

8 BY MR. PIRFO:

9 Q Mr. Johnson, yesterday you recall in answering  
10 questions from Mr. Sinkin you referred to biggies and  
11 not so biggies in terms of potentially reportable  
12 items. And then this morning with questioning from  
13 Judge Lamb you referred to or Mr. Heishman referred to  
14 trivia reporting.

15 Would you give at least Region IV's view with  
16 regard to the amount of self-policing and self-screening  
17 the utility must do so that 50.55(e) can be an effective  
18 regulatory tool?

19 A (By Mr. Johnson) I think it really keys on  
20 that evaluation process that occurs prior to making or  
21 telephoning the item in to the region and following it  
22 up with a written report. Where we have seen -- where  
23 we have utilities who use very quick turnaround, in one  
24 case five days, we end up with an enormous number of  
25 reports being made to us of which only a small

1 percentage, like one-third, end up being truly  
2 reportable. Well, we have to deal with, you know,  
3 two-thirds of that is chaff that, you know, we have to  
4 deal with. We have to take an initial look at to see if  
5 it looks like something we ought to be taking, you know,  
6 prompt and vigorous action on.

7 That becomes a drain on resources. We accept  
8 that because we get information early that way where the  
9 evaluation process is longer and results in more of them  
10 being screened out of that part that gets reported to  
11 the NRC. And the number of items that are actually  
12 reportable out of all those reports that are made to the  
13 NRC becomes more like two-thirds.

14 So, when I say biggies, I mean the ones that  
15 end up being actually reportable and the ones, you know,  
16 the not so biggies are the ones that are not -- do not  
17 meet the criteria of 50.55(e), nonetheless, they're  
18 deficiencies, they have to be disposed of, dispositioned  
19 properly by the licensee.

20 Q Is not part of the utility's task then in  
21 doing this not to avoid flooding or blizzarding the  
22 agency with too much information, that they're supposed  
23 to do a screening process and to get some handle on the  
24 problem before it's reported to the NRC?

25 A That's exactly right. We want the licensee to

1 build his plant properly in accordance with the  
2 requirements and his FSAR. We cannot possibly do that  
3 job for him. The fact that these reporting requirements  
4 require him to use a certain level of judgment, that we  
5 try to measure that judgment gives us some confidence,  
6 that additional confidence that he understands what are  
7 truly significant problems and what are routine problems  
8 that just need to be dispositioned in accordance with  
9 the type quality assurance requirements.

10 Q Mr. Constable, do you have something to add?

11 A (By Mr. Constable) I just want to add a  
12 little there.

13 When they send in a 50.55(e), they call it in,  
14 they call it in to the regional office. It generally  
15 involves section chiefs and folks there. The inspectors  
16 on site are often aware of these things anyway and these  
17 lower-level type of reports or concerns, shall we say,  
18 things that don't quite meet the potential category are  
19 generally fairly well known to the inspectors on site.

20 So, it's not like they're lost in the system  
21 somehow or somehow go generally unobserved. We do  
22 inspect the process on the site. By reporting things as  
23 potentials that really you don't have a good basis for,  
24 you do just take up the time of some of our senior  
25 people that doesn't need to be done.

1           Q     Mr. Heishman, from I&E's point of view, do you  
2 have anything to add to their answer?

3           A     (By Mr. Heishman) I would add one short  
4 statement, that the use of the word "trivia" this  
5 morning was intentional in that that word is used in the  
6 guidance a time or two to point out that in reality the  
7 intent of the rule is to not get involved in things that  
8 don't have significance. While the word "significance"  
9 is not described or defined very well, we try to  
10 approach it from both sides. And, so, what the region  
11 has described I think is consistent with the I&E  
12 position.

13          Q     So, one of the duties under 50.55(e) is to  
14 look at information handed to you much as in the Quadrex  
15 report and to make a determination as to what you report  
16 to the NRC?

17          A     Absolutely. And I might add that in my  
18 fifteen years of experience in doing this, not all of  
19 which did 50.55(e) exist, one of the things that I  
20 looked at very carefully was to try to determine and to  
21 use as a measure how many of what type of items were  
22 reported by a utility because that was a measure for me  
23 as to whether or not they really understood and was  
24 applying that criteria.

25          Q     Thank you.

1 MR. PIRFO: I have no further questions, Mr.  
2 Chairman.

3 JUDGE BECHHOEFER: Mr. Sinkin?  
4

5 RECROSS-EXAMINATION

6 BY MR. SINKIN:

7 Q Mr. Johnson and Mr. Taylor, I think at least  
8 this applies to you. You were asked a question about  
9 whether the Nuclear Regulatory Commission in your  
10 recollection has ever cited anyone for a failure to  
11 notify the NRC of an item that turned out to be  
12 ultimately not reportable and your answer was no. Is  
13 that correct?

14 A (By Mr. Taylor) Right.

15 A (By Mr. Johnson) My answer was in my  
16 recollection it had not occurred.

17 Q Is it not correct that prior to coming into  
18 the hearing this morning, you rehearsed that answer in  
19 the hall with HL&P's attorneys?

20 MR. PIRFO: I'll object to that question.

21 MR. SINKIN: Mr. Chairman, I think it goes to  
22 the credibility of these witnesses as to how their  
23 testimony is being given. This question was asked in  
24 the hall by HL&P attorneys to find out what their answer  
25 would be. They told them what their answer would be.



1 Their attorneys were not present.

2 I contrast that with my approach to Mr. Tapia  
3 where there was a big stink momentarily about whether I  
4 had approached him through the attorneys and the  
5 attorneys were present and it turned out they were so  
6 there was no problem.

7 I think this kind of cooperation between the  
8 NRC Staff witnesses and the HL&P attorneys is an  
9 excellent illustration of why this panel simply is not  
10 credible.

11 MR. PIRFO: I'll object to that question. I  
12 object to that statement and move to strike it.

13 It's not the place to -- this is absurd. Mr.  
14 Sinkin is attacking the Nuclear Regulatory Commission  
15 process, he's attacking me personally, Mr. Reis  
16 personally, this panel, the credibility of the Nuclear  
17 Regulatory Commission, the credibility of the  
18 Applicants, their integrity. This is nothing but a slur  
19 and I resent it.

20 I don't see -- to the extent Mr. Sinkin talked  
21 to my witnesses, he was without permission to do so and  
22 that is why I objected to it. If one of the Applicants  
23 talked to the witnesses, it was with my permission.  
24 These people have to deal with the Applicant on a daily  
25 basis. They do it all the time. Intervenors do not

1 have that. They're not in that position.

2 MR. SINKIN: But we're in a hearing right now,  
3 Mr. Chairman, and the question is what is the answer to  
4 a given inquiry and is it your best and most complete  
5 answer and all of that. And what we had here was going  
6 out and finding out what the answer's going to be before  
7 the question's asked so that the proper answer can be  
8 given so they will be on notice what the question's  
9 going to be.

10 We don't think that's an appropriate way --  
11 the NRC Staff supposedly is a neutral third party in  
12 these proceedings --.

13 MR. REIS: Mr. Chairman --

14 MR. SINKIN: -- and the idea of going out and  
15 rehearsing their questions and answers with the  
16 Applicants as opposed to their own attorneys just is  
17 simply not acceptable.

18 MR. REIS: Mr. Chairman, I think we can  
19 diffuse this. I don't think there's anything that Mr.  
20 Sinkin has indicated that indicates that this is not the  
21 opinion of these witnesses. The fact that the opinions  
22 were solicited in the hall as well as in the hearing  
23 room doesn't show any impropriety.

24 It would be different if he was in some way  
25 indicating that this was not the opinion of the

1 witnesses. We could ask the witnesses again were they  
2 influenced in any way by the attorneys for HL&P in  
3 giving these answers. But that's really the crux of  
4 what we're doing, we're dealing with here, were the  
5 answers in any way wrong --

6 MR. SINKIN: No, sir, that is not the crux.

7 MR. REIS: -- and that's the crux. That is  
8 the only thing that can be material.

9 MR. SINKIN: No, it is not the only thing that  
10 can be material. If the witnesses say yes, they have  
11 been cited thirty-five times that we know of, the  
12 question never would have been asked.

13 MR. GUTTERMAN: Mr. Chairman, that may or may  
14 not be. But the point is nobody told these witnesses  
15 what answer to give. Nobody said, gee, I want you to  
16 answer this way to this question. I just asked a  
17 question of the witnesses in the hall, I asked the same  
18 question in the hearing room. I got the same answer in  
19 both places. I don't see why that in any way undercuts  
20 the witnesses' credibility.

21 MR. REIS: I think this matter has fully been  
22 ventilated on the record now with everyone going back  
23 and forth in this discussion. If Mr. Sinkin still wants  
24 a ruling, I think it could be made. I think the record  
25 will reflect this discussion and I think it can be

1 closed.

2 MR. SINKIN: I think the discussion answers  
3 the question.

4 MR. GUTTERMAN: There is one other point I  
5 want to make and that is obviously this wasn't something  
6 secret going on in the hall. Mr. Sinkin was right there  
7 listening to it. He wasn't invisible. He was right  
8 there standing in the same vicinity, virtually in the  
9 same conversation.

10 MR. SINKIN: Well, that's just how blatant  
11 it's become, I guess.

12 MR. GUTTERMAN: There is nothing secret that  
13 went on.

14 JUDGE BECHHOEFER: I think we'll just drop the  
15 subject. We won't strike anything, but we won't --  
16 we'll just let the record stand.

17 Q (By Mr. Sinkin) Mr. Taylor, you discussed the  
18 ECP problem and the eventual resolution of that  
19 problem.

20 As I understand your testimony and looking at  
21 the supporting documents, there was initially a concern  
22 about whether the heat load to the essential cooling  
23 pond would exceed the technical specifications. That  
24 was analyzed and it was found it would exceed the  
25 technical specifications. But then the equipment that

1 might be affected was analyzed and found to be capable  
2 of dealing with the excess heat. Is that correct?

3 A (By Mr. Taylor) You mischaracterized it. I  
4 was never concerned about the heat load exceeding the  
5 technical specifications during shutdown.

6 Q What would the heat load have exceeded?

7 A It wouldn't have exceeded anything, even  
8 though Quadrex seems to say that it would. The only  
9 thing that it could have exceeded, and it's not in terms  
10 of heat load it's in terms of ultimate temperature of  
11 the sink, was the equipment qualification level of  
12 various equipments that are being cooled by the service  
13 water system.

14 Q Okay. So, it might have exceeded the heat  
15 level of the equipment being cooled by the water?

16 A Yes.

17 Q Okay. So, then you had to go look at that  
18 equipment and see if it could withstand a higher heat  
19 load?

20 A But that wasn't the issue that was in N-17.  
21 N-17 itself really contains three things in my  
22 estimation. One was a disparity between the calculated  
23 temperatures by two different groups, a potential for  
24 error in the calculations by one group, and, thirdly, a  
25 statement that there is a potential for exceeding the



1 tech spec limit during simultaneous shutdown.

2 Now, the third argument is specious, it's  
3 impossible. There is no tech spec limit during that  
4 particular condition. The other two are not necessarily  
5 specious, but I didn't have any information on the  
6 calculational error. In fact, they're not even sure  
7 there is a calculational error according to my  
8 recollection of N-17.

9 The thing that concerned me that I indicated  
10 it would be potentially reportable was the disparity in  
11 the temperatures between the two different groups.

12 Q I need to -- something you just said versus  
13 what you were talking to Judge Shon about doesn't make  
14 sense to me.

15 Weren't you talking to Judge Shon about the  
16 fact that in simultaneous shutdown you have a process  
17 going on dumping a lot of heat into the cooling pond and  
18 that during that process you must be sure that the heat  
19 in the cooling pond is not excessive in regard to the  
20 equipment it's cooling while shutdown --

21 A I did indeed say that.

22 Q But there's no technical specification as to  
23 how much that heat can be?

24 A No, sir.

25 (No hiatus.)

1 Q And why is that?

2 A It would be analogous to a situation with an  
3 emergency diesel engine that we use in the plants; you  
4 have all kinds of safeguards on the plant during its  
5 testing, operation to prevent destruction of the engine.  
6 When the engine is actually needed in an emergency  
7 condition, bypasses are put on almost every one of those  
8 engine safeguards and you let the engine go to  
9 destruction if necessary to fulfill it's function. And  
10 you do the same thing with these other devices in the  
11 plants. If it has to destroy itself to perform it's  
12 function, let it destroy itself.

13 Q Would there be not situations where you go into  
14 simultaneous shutdown of a nuclear reactor, two units,  
15 that aren't an emergency situation, you're doing it maybe  
16 because there's a hurricane off the coast and you decide  
17 to do --

18 A Strangely enough, there's very little  
19 difference of reject heat in an emergency versus  
20 non-emergency.

21 Q What you are saying if you're going into  
22 simultaneous shutdown for whatever reason, it doesn't  
23 matter that the heat in the heat sink might exceed the  
24 limits of the equipment it's cooling.

25 A Correct, you just wouldn't start up again

1 because you've destroyed some of the equipment. You  
2 don't re start, that's all. If you're engineering is  
3 that bad, you just won't restart.

4 Q And that is not equipment that is in any way  
5 essential to shutting the plant down.

6 A I'm going to try and say it this way. Let's  
7 say the equipment was qualified for 105 degrees, either  
8 by analysis or by test. That doesn't really necessarily  
9 mean that the equipment is going to fail at 106 degrees,  
10 by any stretch of the imagination. It might not fail  
11 until it hits a 150 degrees. You don't know that, that's  
12 the problem.

13 Q But the equipment being cooled is not essential  
14 to shutting the plant down?

15 A Fair share of it is, yes.

16 Q But then what you're saying is you would allow --  
17 you could allow enough heat to be dropped in there to  
18 destroy the equipment that's actually necessary to shut  
19 the plant down.

20 A But you're putting it in terms of instant  
21 destruction.

22 Q You are saying there's no tech spec so there's  
23 no point at which you stop dumping heat because there  
24 would be no signal to you that I've exceeded a limit?

25 A There's no tech spec limit on the upper

1 temperature.

2 A (By Mr. Johnson) To put this in perspective,  
3 there's a tech spec limit during normal operation. If  
4 you're shutting down, there's no -- that tech spec limit  
5 goes away because the tech spec limit is a limiting  
6 condition for operation.

7 Q So there is no limiting condition for shutting  
8 down? Do you have an unlimited ability to dump heat into  
9 the heat sink?

10 A I think you are a little confused now and  
11 perhaps we have helped you in that regard. I'll try to  
12 get back.

13 Let's assume that the tech spec says emergency  
14 cooling pond for normal operation shall be limited to a  
15 temperature of 100 degrees. And you are at 95, degrees,  
16 96, 97, whatever, but you're less than a hundred. And  
17 you start shutting down both units.

18 Q Right.

19 A It's time for routine outage or whatever  
20 condition. And you go above a hundred degrees. So what?  
21 You would go to the tech specs and see that if you exceed  
22 a hundred degrees you shut down. But I am shutting down.  
23 So you're in a catch 22 situation.

24 Now there's a calculation that has to be made  
25 to demonstrate that if you -- that the hundred degrees

1 normal, say you were operating right at a hundred degrees  
2 with both units, that the equipment that would be needed  
3 in the plant, say on a loss of coolant accident, could be  
4 sufficiently cooled at that hundred degrees so that it  
5 would not destroy. And those calculations, you know were  
6 done then. But the issue of, you know, of the tech spec  
7 thing is, you know, becomes a moot point because you're  
8 doing what you would have to do; you've exceeded tech  
9 specs so shut down, but I am shutting down.

10 Q I understand that particular logic sequence.  
11 Let me set up a different logic sequence.

12 You're shutting down; it's routine normal  
13 outage, and you're heat sensors tell you that for  
14 whatever reason, the essential cooling pond is up at 150  
15 degrees. And that 150 degrees can destroy the very  
16 equipment you need to shut the plant down but you don't  
17 have any limit that tells you you can't go beyond 150  
18 degrees so you go to 160 and destroy the equipment and  
19 the shutdown fails.

20 A (By Mr. Johnson) You better --

21 A (By Mr. Constable) Tech specs establish a  
22 starting place for accidents. They don't say what it  
23 ultimately go to during an accident, they establish the  
24 starting points. The envelope the way in which the  
25 system is designed to operate.



1           A     (By Mr. Johnson) I understand his problem. I  
2 think understand your problem.

3           Q     Fine.

4           A     The design says if I limit my starting point to  
5 this temperature, all the heat that I could possibly ever  
6 put into it through the sequence of shutting down and  
7 having to reject that heat will not bring the temperature  
8 to such a point that the equipment will be, you know,  
9 will be rendered inoperable.

10          Q     But if you are wrong, do you have any way of  
11 knowing that you've gone beyond that temperature that the  
12 calculation was based on.

13               MR. GUTTERMAN: Mr. Chairman, we're getting far  
14 afield of the Quadrex finding now. We're talking about  
15 how to operate the plant. And this is --

16               MR. SINKIN: This is precisely the concern  
17 Quadrex had, the simultaneous shutdown and the amount of  
18 heat that was going to be dumped into the heat sink.  
19 That's precisely the concern they're expressing here.

20               MR. GUTTERMAN: Mr. Chairman --

21               MR. PIRFO: It's far outside the scope of the  
22 questions of Judge Shon, I believe it was,

23               MR. SINKIN: This is exactly the line of  
24 questioning Judge Shon was pursuing.

25               MR. GUTTERMAN: I think what we're doing now is

1     trying to educate Mr. Sinkin on how to run a nuclear  
2     plant and how to do safety analysis and what role  
3     technical specifications play and all that. But I think  
4     the witnesses have been very clear on the particular  
5     technical specification that's being dealt with in N-17  
6     and I think they've made very clear that the safety  
7     analysis for heat loads that might exceed the tech spec  
8     is not a technical specifications question, it's a  
9     question of safety analysis.

10           Q     (By Mr. Sinkin) My current question posited a  
11     particular situation and that was you have a simultaneous  
12     shutdown going on because, perhaps, you've exceeded the  
13     tech spec and that tells you're supposed to shut down.  
14     Whatever, the tech spec is irrelevant to the situation  
15     I'm positing. You've already gone past the tech spec,  
16     perhaps, and you're shutting down. You have a  
17     simultaneous shutdown of both units dumping a lot of heat  
18     into the heat sink. In theory, obviously, you could have  
19     so much heat being dumped that it would destroy the  
20     equipment if the original calculations on how much heat  
21     was going to be dumped during a simultaneous shutdown  
22     were in fact wrong and more than that was being dumped,  
23     you could reach a point where the amount of heat being  
24     dumped is destroying the equipment you need for the  
25     shutdown. But you have, under the system I've heard you

1 describe, you have no indicator of what that temperature  
2 is that would cause you to maybe stop the shutdown.

3 A (By Mr. Johnson) Wait, wait, wait.

4 MR. REIS: Can I have a question. I object in  
5 that I don't want anybody to answer unless I have a  
6 particular question on the floor. So that we have some  
7 focus to this.

8 JUDGE SHON: I think it is about time we  
9 stopped pursuing this particular rabbit down the rabbit  
10 whole. The difficulty is not that -- and I think that  
11 the thing the Quadrex Corporation pointed out was not  
12 that you might be caught unable to dump as much heat as  
13 you needed to shut the plant's down simultaneously; it  
14 was that their calculations indicated that the  
15 temperature would rise above a tech spec and that  
16 particular thing, as Mr. Taylor said, is specious, it  
17 really has nothing to do with the case. I'm not sure it  
18 was you that said it.

19 MR. TAYLOR: I think I did.

20 MR. SINKIN: Mr. Taylor did say it.

21 JUDGE SHON: The assurance that I'm sure you're  
22 seeking that you are not going to get caught in a catch  
23 two two situation where you can't shutdown because the  
24 shutdown heat has burnt down the shutdown pumps or  
25 something, is precisely -- has nothing to do with the

1 tech specs. But that is the point that Mr. Taylor wanted  
2 them to report as a potential, that there might be a bad  
3 calculation on that.

4 MR. SINKIN: The inconstistency, I believe.

5 MR. TAYLOR: I believe the inconsistency of  
6 calculations between two engineering groups.

7 MR. SINKIN: I would point out while Quadrex  
8 may have used this term tech spec here, that they say  
9 this entire area needs to be carefully re-examined  
10 particularly with respect to assumptions regarding  
11 availability of various heat sinks and equipment  
12 operating limits. I think their concern was whether the  
13 equipment operating limits would be exceeded by the  
14 amount of heat dumped, that's their fundamental concern.

15 Now, whether they refer to a tech spec in  
16 error, refer it to a tech spec, the real concern is  
17 whether an appropriate analysis has been done as to  
18 whether the amount of heat dumped will exceed the limits  
19 of the equipment for shutdown. And what I was hearing  
20 the witnesses say was you don't have a signal anywhere in  
21 the system that the amount of heat dumped is exceeding  
22 the ability of the equipment to survive.

23 A (By Mr. Johnson) We need -- we need to resolve  
24 this.

25 MR. PIRFO: Is there a question pending?

1 JUDGE SHON: No, but I think it's worthwhile  
2 having the witness explain. That's not what I heard them  
3 say. I'm sure there are temperature sensors and things.

4 MR. SINKIN: I didn't hear that.

5 MR. TAYLOR: Can I perhaps clarify one more  
6 thing. On the basis of having been at these hearings for  
7 a part of the time for the last three weeks or four  
8 weeks, during the last week, I was in the office for part  
9 of the time; I availed myself of an opportunity to go  
10 look at the current status of the FSAR, I have no idea  
11 what it was in 1981, but I know what it is today.

12 As of Thursday or thereabouts, the tech spec  
13 had or the FSAR has a calculation or the answer to a  
14 calculation that indicates the heat load dumped to the  
15 ultimate heat sink, during normal operation, during  
16 emergency shutdown, and during normal shutdown, and I'm  
17 going to give some numbers quickly off the top of me  
18 head. Normal operation is 225 million Btu per hour; both  
19 of them shut downs conditions of 377 million Btu per  
20 hour. But the span times are different. It's about  
21 fifteen minutes for emergency shutdown and 25 minutes for  
22 normal shutdown.

23 The limiting condition for operation,  
24 temperature wise, is not yet stipulated, today, or as of  
25 Thursday, it was not yet stipulated in the tech spec.



1 The tech spec very specifically reads that if the water  
2 level in the ultimate heat sink or the unspecified  
3 temperature, both which are unspecified I might add, are  
4 exceeded, they will shut down in so many hours.

5 JUDGE SHON: I think, however, what Mr. Sinkin  
6 was concerned with was he seemed to think that when one  
7 was shutting the plant down under the conditions under  
8 which the ultimate heat sink would reach its highest  
9 temperature, say high temperature -- high atmospheric  
10 temperature, high humidity and everything else, worse  
11 that you'd normally encounter, you wouldn't know it if  
12 the temperature in that pond went to the point where it  
13 could no longer keep all the bearings cool and that sort  
14 of thing. That's not true.

15 MR. TAYLOR: Clearly incorrect.

16 Q (By Mr. Sinkin) Why?

17 A (By Mr. Johnson) Okay. Because Mr. Sinkin,  
18 the plant cannot reject any more heat than it can reject.  
19 I mean, we can calculate that maximum amount of heat.  
20 And that's why we're going to at the end, before the  
21 plant gets licensed, we're going to fix that number in  
22 the tech specs because that number is going to be  
23 selected such that the starting point is such that that  
24 maximum amount of heat put into it will not exceed the  
25 equipment qualification ratings so that the plant is

1 brought to safe shutdown.

2 That's exactly why you have that condition for  
3 operation. It says if you hit this point, you must  
4 either restore it within some, and there's some period of  
5 time, manhours, a day, in hours, or you must be in cold  
6 shutdown in the next so many hours. You know, so that --

7 Q So until you've done that ultimate calculation  
8 of how much total heat can be rejected, there's no  
9 meaning to an existeng tech spec limit because it has to  
10 be based on the ultimate calculation being done.

11 A You have to have that total amount of heat  
12 that's going to be rejected and then you have to take  
13 into account the amount of water, because if you but the  
14 more water in the pond, you could --

15 Q Take more heat?

16 A -- allow it to go to a higher temperature, it's  
17 got a bigger volume of heat sink. So you have to fix the  
18 level and you have to fix the maximum temperature in  
19 order to have the appropriate heat sink and it becomes an  
20 iterative calculation.

21 A (By Mr. Constable) What we're saying there's a  
22 lot of variables and a lot of ways of achieving --

23 Q I didn't hear.

24 A There's a lot of variables and there's a lot of  
25 ways of achieving the same end property. It has to be

1 studied and the best way decided upon so they won't have  
2 a safety problem.

3 JUDGE SHON: I think we've beaten this subject  
4 about the head and shoulders as completely as we're going  
5 to.

6 MR. PIRFO: May I suggest this is an  
7 appropriate time for a break?

8 MR. SINKIN: I just have -- it didn't really  
9 get into the questions I was going to ask on this  
10 particular point and I really just have one, so if I  
11 could ask that question.

12 Q (By Mr. Sinkin) I was just trying to get the  
13 process clear in my mind that you went through, or at  
14 least that this entire item went through in getting  
15 resolved, does anyone know whether at the time this  
16 finding was made Brown & Root had made some ultimate  
17 calculation of how much total heat would be dumped in the  
18 ECP?

19 A (By Mr. Taylor) That will -- and you're going  
20 to reject --

21 MR. PIRFO: Gentlemen, this is -- if this is a  
22 conference, hold your voices down. The reporter takes  
23 down everything you say.

24 MR. SINKIN: What can I tell you --

25 JUDGE BECHHOEFER: Too late.

1           A       (By Mr. Johnson) As indicated in N-17, they  
2 had done calculations on the amount of heat being  
3 rejected, I think Quadrex was saying hey there are  
4 additional heat loads; you know, we think there are  
5 additional heat loads; you ought to consider they may be  
6 higher. We did a rough hand calculation, recognize that  
7 at this stage those are also estimates because you may,  
8 you may add another piece of equipment, you know, you  
9 could do a lot of things which will change the amount of  
10 heat that you've got to deal with.

11           Q       But at this point, the essential cooling pond  
12 was built, was it not?

13           A       Yes. It existed there was a pond there. We  
14 hadn't decided what the water level should be or what the  
15 maximum allowable operating temperature would be. In  
16 fact we're going to have to it rate. I think it still  
17 showed that the design was in a relatively early stage,  
18 that they were starting to make some estimates on the  
19 amount of heat, and when you add another piece of  
20 equipment, if they change the -- if they upped the  
21 maximum amount of core operating power in the nuclear  
22 design adding another five megawatts thermal, you're  
23 going to have to go through that calculation again  
24 because there's another small increment of the decay heat  
25 that's going to have to be rejected.

1           Q     In the way you used deficiency yesterday, if  
2     Brown & Root was wrong in the ultimate total heat that  
3     might be put in the essential cooling pond, essential  
4     cooling pond is built, they're wrong about the ultimate  
5     amount of heat that might be put in there, until they've  
6     actually finished all calculations and installed all  
7     equipment and done that final calculation, you don't have  
8     a deficiency as you used that term in 50.55(e)?

9           A     I think because of the iterative nature of the  
10    thing --

11          Q     So that -- I'm sorry, were you finished?

12          A     No. This would have to be finalized. Hey, if  
13    at the end of the process you say, "Look, I've filled the  
14    thing to the highest level I can, assuming you know you  
15    don't get the overtopping with the seismic event and all,  
16    and I'm operating it at all and I'm operating it at the  
17    lowest temperature I can reasonably justify with, you  
18    know, local environmental conditions and all that, and I  
19    can't make my conditions, I can't meet the, you know, the  
20    acceptance criteria for absorbing the amount of heat,"  
21    certainly we would have a reportable item. We would also  
22    have an item that would cause the plant not to get  
23    licensed.

24                We would hope that they're a little smarter  
25    than that.



1           It becomes the same kind of process as laying  
2 out a base mat for a foundation. You are not at that  
3 time, you are pouring the create or placing -- I say  
4 pouring, he reminds me it's placing -- you make a rough  
5 estimate that there are going to be certain loads.

6           You try to be very very conservative on that  
7 because as the plant gets erected and the regulatory  
8 requirements increase, you know, you find you're having  
9 to buy hydrogen combiner system and that's a certain load  
10 and all that, so that when you get done and you calculate  
11 actually all I have this equipment and so therefore the  
12 base mat sees this much load, that you damn well better  
13 be within limits or you know, kiss it goodbye and wrap it  
14 up.

15           Q     Okay. Then --

16           MR. PIRFO: Mr. Chairman. The witnesses has  
17 been going at it for some time.

18           MR. SINKIN: This is the last question.

19           Q     (By Mr. Sinkin) Then if Mr. Taylor had come to  
20 you, May of 1891, or any time prior to delivery of the  
21 Quadrex report, and brought N-17 to your attention and  
22 said that he considered it a potentially reportable item  
23 that HL&P had not reported, you would have disagreed  
24 because you would not have found a deficiency in the way  
25 you understand 50.55(e)?

1           A     (By Mr. Johnson) I don't think Mr. Taylor  
2 would have brought it to me. He would have seen it the  
3 same way.

4           Q     I think Mr. Taylor's testimony indicates?

5           MR. PIRFO: Mr. Chairman, if we're going do  
6 continue with this, the witnesses have been going for  
7 some time. Mr. Sinkin told me five questions ago he only  
8 had one question.

9           JUDGE BECHHOEFER: I'm not sure we're going to  
10 let you. It's getting a little -- you're not producing  
11 very much.

12          MR. PIRFO: That was established eight  
13 questions ago.

14          JUDGE BECHHOEFER: I'm not only sure this area  
15 deserves anymore questions at all.

16          JUDGE SHON: Why don't we take a break.

17          JUDGE BECHHOEFER: How many more other  
18 questions do you have, or, because you've wasted an awful  
19 lot of time getting almost nothing on this subject, and  
20 due to a basic, I guess, misunderstanding of the  
21 technical subject.

22          MR. SINKIN: Well, Mr. Chairman, with the  
23 introduction of Applicants' Exhibit 77, I may well be on  
24 this panel on Tuesday.

25          JUDGE BECHHOEFER: You're not going to be

1 allowed to be asked very many questions on 77. We told  
2 you the purpose for which it was being admitted.

3 MR. SINKIN: Okay.

4 JUDGE BECHHOEFER: Let's try ten minutes.

5 (Recess.)

6 JUDGE BECHHOEFER: Back on the record.

7 MR. SINKIN: Mr. Chairman, I regret we had the  
8 long digression to try and clarify what this tech spec  
9 and the total heat load were all about.

10 Q (By Mr. Sinkin) My original question really  
11 did not intend to ask about that. The original question  
12 I was trying to get at is on page 45, answer 134, Mr.  
13 Taylor states he believes there was sufficient  
14 information in the assessment of question N-17 to make  
15 those items a potentially reportable 50.55(e) item. And  
16 just to clarify the policy of Region IV, even if that  
17 were your opinion at the time, if you had held that  
18 opinion -- if you saw Quadrex and held that opinion, I  
19 realize you weren't there, but putting yourself in that  
20 position, if you held that position that it was  
21 potentially reportable and was not notified, there would  
22 be no violation.

23 A (By Mr. Taylor) That's correct.

24 Q Mr. Johnson, are you aware of how the Quadrex  
25 report came to the attention of the Nuclear Regulatory

1 Commission, the full circumstances?

2 A (By Mr. Johnson) No, sir. I understand the --  
3 some of the circumstances. I'm not sure I could say I  
4 understand the full circumstances.

5 Q You know that there was an NRC investigation  
6 that led to the inspector and the investigator reading  
7 the Quadrex report?

8 A Are you referring to 82-02?

9 MR. PIRFO: This is totally beyond the scope of  
10 any direct testimony or any Board questions I heard.

11 JUDGE BECHHOEFER: Or of Applicants'  
12 cross-examination.

13 MR. PIRFO: Or Applicants as well, of course.

14 JUDGE BECHHOEFER: Where does this he -- where  
15 are you going on it?

16 MR. SINKIN: It deals with the questions that  
17 were asked about whether there was an intention on the  
18 part of the Applicants to conceal Quadrex. And his  
19 answer said, "No we'd have found it anyway, these kinds  
20 of reports can't be hidden, it would have come out," all  
21 that kind of stuff.

22 JUDGE BECHHOEFER: Okay.

23 Q (By Mr. Sinkin) You are aware that an  
24 inspector and an investigator were conducting an  
25 investigation and that during that investigation, they

1 read the Quadrex report?

2 A (By Mr. Johnson) Are you referring to  
3 inspection, investigation 82-02?

4 Q No, no, no. 81-28 that Mr. Herr and Mr.  
5 Phillips -- Is that yes, you're aware?

6 A I don't recall 81-18. I may have read it but  
7 I'm not sure I remember the details in it.

8 Q So in giving your answer, you were not aware  
9 that it was because of an a miscellaneous allegation  
10 producing an NRC investigation that the Quadrex report  
11 was finally read in its entirety by the NRC, you were not  
12 aware of that fact?

13 MR. PIRFO: I object to that characterization.  
14 I'm not sure if that's the foundation of why it was or  
15 why it wasn't. Mr. Johnson has given what his knowledge  
16 of the facts were at that time and that's whatever it's  
17 worth, that's in the record.

18 MR. SINKIN: I'm just trying to establish that  
19 he wasn't aware of that the sequence of events I just  
20 laid out while giving his answer.

21 MR. GUTTERMAN: That sequence of events has  
22 some conjecture in it that I don't think is any part of  
23 any recognized sequence of events.

24 MR. PIRFO: That's my problem with the  
25 question.



1 MR. SINKIN: The sequence of events is clearly  
2 documented in 81-28.

3 JUDGE BECHHOEFER: I don't have it in front of  
4 me, so --

5 MR. GUITTERMAN: I think it's clearly -- you  
6 know, we had 81-28 in the record, Mr. Chairman, and it  
7 was discussed --

8 JUDGE BECHHOEFER: I'm aware.

9 MR. GUTTERMAN: And it was discussed at some  
10 length in Phase I and I think any review of that will see  
11 that there is no statement in 81-28 that bears out what  
12 CCANP has just said.

13 MR. SINKIN: Well, Mr. Chairman, it was  
14 individual A called the NRC with an miscellaneous  
15 allegation from a Houston Lighting & Power quality  
16 assurance person that led to an investigation and during  
17 the investigation, Quadrex was read by the investigators.  
18 I think that's known to all parties in this proceeding.

19 MR. REIS: Can we get -- I guess there's an  
20 objection on the floor.

21 JUDGE BECHHOEFER: Yes, there is.

22 We'll allow at least this one question, I'm not  
23 sure we'll allow any --

24 MR. SINKIN: This was the only one I have,  
25 whether he was aware of that particular sequence of

1 events.

2 JUDGE BECHHOEFER: And I do it without knowing  
3 specifically whether that's accurate or not. I don't  
4 have 81-28 in front of me. But to refresh Mr. Johnson's  
5 recollection, you can ask the question.

6 A (By Mr. Johnson) I am aware that Mr. Phillips  
7 asked for, it was broad category of records. And that's  
8 in his testimony. Shortly thereafter, the Quadrex report  
9 says, "Here, you can read the whole thing."

10 I'm also aware that the report was apparently  
11 discussed with project manager and I'm aware of the  
12 results of the investigation 82-02 which indicate that  
13 there was no apparent attempt to covertly, overtly,  
14 withhold the report from the NRC; that as much as I know  
15 on that subject.

16 Q Okay. Now, in discussing the process of  
17 evaluating whether an item is potentially reportable, you  
18 talked about identifying what appears to be a  
19 non-conforming problem and then writing up an NCR and  
20 going through the whole process of screening and all of  
21 that. Do you know if out of the Quadrex report, any  
22 documents were generated that would be the equivalent of  
23 an NCR?

24 A I don't know of any. Certainly may have been  
25 but, I don't.

1 Q Anybody else on the panel know?

2 MR. PIRFO: Mr. Chairman, I think this is all  
3 documented in NUREG 0498. I don't know what Mr. Sinkin's  
4 driving at.

5 Q (By Mr. Sinkin) I'm talking about at the time  
6 Quadrex was delivered in May 1981 whether Houston  
7 Lighting & Power generated any documents that were the  
8 equivalent of an NCR out of the Quadrex report.

9 A (By Mr. Johnson) I understand the process, and  
10 this is typically what's followed by the utilities on  
11 quality assurance audits, whether it's HL&P people or  
12 Bechtel people doing an audit, they'll issue the audit  
13 report, it will have findings there and those findings  
14 will be also transcribed on to those documents.

15 That was not part of the contractual  
16 arrangement with Quadrex. Utility treated each one of  
17 those items, followed them up in the Bechtel task force  
18 report, the way that they would have had Quadrex been  
19 required under the contract to issue them the report and  
20 a stack of, "Here are the individual findings transferred  
21 to your HL&P locally prepared forms."

22 The information is treated in the same  
23 fundamental manner, however. But not on those forms.  
24 Not that I'm aware of. Some engineer may have written up  
25 something which goes through the system, I just don't

1 know.

2 Q You talked about the relationship of the  
3 resident reactor inspector to -- he's aware of at least  
4 important items, knows what's going on in the plant, so  
5 that's one of your checks. Is there any resident  
6 inspector off site in the headquarters operation in  
7 Houston, particularly in the engineering department?

8 A No.

9 We had one for a year during the transition  
10 period but that is not part of the NRC's inspector  
11 program.

12 Q Do you know if the minutes of the incident  
13 review committee, the Houston Lighting & Power incident  
14 review committee, are considered quality records that  
15 must be maintained?

16 MR. GUTTERMAN: Is the question, the minutes of  
17 the incident review committee?

18 MR. SINKIN: That was the first question, yes.  
19 We have in evidence here, we have various documents that  
20 are the minutes of the IRC.

21 MR. REIS: Mr. Chairman, we have memoranda from  
22 the IRC dealing with specific matters. I'm not sure  
23 they're minutes.

24 MR. GUTTERMAN: It does say minutes, Mr.  
25 Chairman.

1 MR. REIS: I withdraw my objection.

2 MR. SINKIN: Says minutes right on them, yes.

3 A (By Mr. Johnson) I don't know.

4 Q (By Mr. Sinkin) Do you know if the  
5 documentation other than the minutes that the IRC creates  
6 as to why they find a potentially reportable finding or  
7 don't are quality records?

8 A (By Mr. Johnson) I would suspect that much of  
9 the material that they review are quality records. They  
10 probably also review handwritten notes from, you know,  
11 one individual to another, those are not quality. But  
12 I'm sure NCR's, and calculations, other special reports,  
13 will be quality records.

14 Q I'm really looking at documentation the IRC  
15 would generate. To your knowledge, is any of the  
16 documentation the IRC itself generates quality records?

17 A I just don't know. I'd have to examine what  
18 kinds of things they are and I don't know.

19 Q But in general, the documentation by the  
20 Applicant of why they reported or did not report a given  
21 item would that in your view be a quality record that  
22 should be maintained?

23 A The bases for their determination is not  
24 specified to be generated or maintained. You know, the  
25 specific -- a specific summary document that says here's



1 my bases. The quality related documentation, of course,  
2 that they would draw on to arrive at that, would be.

3 Q I guess what I'm looking for is when you want  
4 to check on whether they made the right decision, how  
5 would you know what quality related records they looked  
6 at if the documentation of what they looked at is not a  
7 record that you can look at that's maintained?

8 A We're not requiring licensee to maintain  
9 records for our convenience. I'm not trying to be  
10 facetious. We don't require them to package them up so  
11 that we can go to, although for expediency, he often will  
12 do that with certain categories of records. We require  
13 him to maintain the quality documentation.

14 We will question people, "What did you use?"

15 We might have to do a fair amount of leg work  
16 to track back through that, but the -- those quality  
17 records we expect to find but we don't require him to  
18 maintain a summary record.

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

20 JUDGE BECHHOEFER: Mr. Axelrad or Gutterman.

21 MR. GUTTERMAN: Let's see, I did have one  
22 question.

23 RE-CROSS EXAMINATION

24 By Mr. Gutterman:

25 Q Mr. Taylor, do you have the Quadrex report in

1 front of you?

2 A Yes.

3 Q It's Applicants' Exhibit 60. I'd ask to you  
4 turn to Page 4-61. The question I wanted to ask you is  
5 in all the dialogue about the matter reflected in  
6 question N-17 which your testimony says you would have  
7 felt was potentially reportable, does that relate to  
8 finding 4.6.2.1(m) as in Michael, on page 4-61 of the  
9 Quadrex reported?

10 A (By Mr. Taylor) It appears that way.

11 MR. GUTTERMAN: Thank you, that's the only  
12 question I have.

13 JUDGE BECHHOEFER: The Board has no further  
14 questions. Mr. Sinkin, any follow-up?

15 MR. PIRFO: I believe I'm next but I have no  
16 questions.

17 CROSS-EXAMINATION

18 By Mr. Sinkin:

19 Q Did your testimony also refer to Quadrex  
20 generic finding 3.1(b)?

21 MR. GUTTERMAN: I assume the question is the  
22 testimony about --

23 MR. SINKIN: About N-17.

24 Q (By Mr. Sinkin) Does your question about N-17  
25 also refer to Quadrex finding 3.1(b)?

1 MR. GUTTERMAN: Okay, I'm just concerned that  
2 in asking that you're not trying to create the  
3 implication that the testimony was that finding 3.1(b)  
4 was potentially reportable. But that's --

5 MR. SINKIN: Whether 3.1(b) is potentially  
6 reportable depends in part on whether the findings within  
7 3.1(b) or that support 3.1(b) were reportable.

8 MR. GUTTERMAN: I realize you are arguing that.  
9 But his testimony is clear that all he's saying was  
10 potentially reportable was a matter related to N-17.

11 MR. SINKIN: And is that matter also found in  
12 3.1(b).

13 MR. GUTTERMAN: That's the question I wanted to  
14 get clear.

15 A (By Mr. Taylor) I'm at a little bit of a  
16 handicap.

17 JUDGE BECHHOEFER: B-2 it is.

18 A I don't have the brief case that this morning  
19 that I should have; but let me try and outline how I did  
20 all of this and maybe it will be self answering. I took  
21 the individual board finding and associated with mine,  
22 took all of the references that were associated with that  
23 generic finding, captured them all into a package, so if  
24 I knew if I had that package I could get back to it very  
25 quickly but I don't have it.

1           Q       (By Mr. Sinkin) Well, Mr. Taylor, your  
2 testimony at Page 44 indicates it was responsive to  
3 generic finding 3.1(c), and I'm trying to determine if it  
4 was also responsive to 3.1(b).

5           MR. GUTTERMAN: I'm now confused by the  
6 question again.

7           MR. SINKIN: Mr. Taylor's testimony at answer  
8 131 while addressing this item 4.6.2.1(n) -- Wait a  
9 minute. Wait a minute.

10          A       (By Mr. Taylor) I think I can answer your  
11 question.

12          MR. PIURFO: No.

13          Q       (By Mr. Sinkin) Let me start with from the  
14 beginning. You were asked whether your testimony  
15 addressed 4.6.2.1(m) as in Michael. Is that correct?  
16 And you said yes.

17          MR. GUTTERMAN: Wait, wait, wait. I think the  
18 question now is mischaracterizing the question that I  
19 asked on.

20          MR. SINKIN: You asked the question whether his  
21 discussion on N-17 --

22          MR. GUTTERMAN: No. What I asked him was the  
23 matter that he testified he believed he would called  
24 potentially reportable was the matter addressed by  
25 finding 4.6.2.1(m) as in Michael.

1 MR. SINKIN: I see. I see. Okay. So okay,  
2 fine. I'll withdraw the question. That's all I have.

3 JUDGE BECHHOEFER: Anyone have further  
4 questions? I guess the panel is excused. Thank you for  
5 bearing with us all.

6 (No hiatus.)  
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1 MR. AXELRAD: Mr. Chairman, if we can have a  
2 ten-minute recess, we may be able to obviate the need to  
3 argue a motion that we were going to present to quash  
4 the subpoena of Mr. Thrash.

5 So, if I could suggest a ten-minute recess.  
6 Otherwise, we can come back at that point and I will  
7 make my motion and --

8 JUDGE BECHHOEFER: We'll give you the  
9 ten-minute recess, but if we start packing up, don't --

10 MR. SINKIN: Don't take offense.

11 (Brief recess taken.)

12 JUDGE BECHHOEFER: Back on the record.

13 MR. AXELRAD: Mr. Chairman, the parties have  
14 reached an agreement with respect to Mr. Thrash.

15 As I have explained to Mr. Sinkin, I have not  
16 been able to reach Mr. Thrash. He is traveling  
17 somewhere between Colorado back, I believe, to Texas,  
18 probably to Beaumont. And from what I understand, he is  
19 scheduled on Tuesday to go back to San Francisco on the  
20 way back to Hawaii which is where he now lives. So, he  
21 would not be able to appear next week, to my  
22 understanding.

23 But in any event, CCANP and Applicants have  
24 reached an agreement that CCANP and we will seek to  
25 develop questions with respect to the notes of the four

1 meetings that Mr. Thrash took which are reflected in the  
2 Board's ruling at pages 14903 and 14904 of yesterday.  
3 We will seek to develop questions which are relevant and  
4 material to the issues in this proceeding.

5 If we can reach an understanding as to those  
6 questions, those questions would then be sent to Mr.  
7 Thrash to be answered in an affidavit which would be  
8 made part of the record. If we cannot reach an  
9 understanding as to such questions, the parties will  
10 then propose to the Board the questions they think are  
11 relevant and material and the Board will then be able to  
12 decide which questions Mr. Thrash should answer by  
13 affidavit. Hopefully, we can reach an agreement so that  
14 the Board will not have to rule on that basis.

15 Am I correct in reflecting our understanding?

16 MR. SINKIN: That's fine.

17 MR. REIS: The Staff has no objection.

18 JUDGE BECHHOEFER: That sounds okay to us.

19 MR. AXELRAD: I might add just one last  
20 thing. I'm not sure in view of -- we will try to  
21 discuss this subject early next week and develop those  
22 questions. I'm not sure how long it will take to get  
23 the questions to Hawaii and get them answered. So, the  
24 responsive affidavit may well come in after the record  
25 is closed next week. But we assume the record will stay

1 open for the limited purpose of receiving that  
2 affidavit.

3 MR. SINKIN: Yes.

4 MR. REIS: The Staff's lack of objection is  
5 predicated on the basis that the record would remain  
6 open only for that limited purpose and not for any other  
7 purpose.

8 JUDGE BECHHOEFER: The Phase II record we're  
9 talking about.

10 MR. SINKIN: Yes.

11 MR. REIS: Yes.

12 JUDGE BECHHOEFER: I think that's fine.

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

14 JUDGE BECHHOEFER: We're adjourned until we  
15 9:00 o'clock next Tuesday right in this room.

16 (Hearing recessed at 11:33 a.m.)

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CERTIFICATE OF OFFICIAL REPORTERS

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)

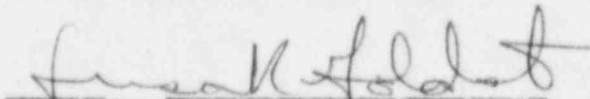
DOCKET NO.: STN 50-498-OL  
STN 50-499-OL

PLACE: HOUSTON, TX

DATE: Friday, August 9, 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

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