

ORIGINAL

UNITED STATES
NUCLEAR REGULATORY COMMISSION

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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DATE: THURSDAY, AUGUST 8, 1985

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1
2 UNITED STATES OF AMERICA
3 NUCLEAR REGULATORY COMMISSION
4 BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

5 -----X

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

10 -----X

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

14
15
16 Thursday, 8 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.,
8 DONALD J. SILVERMAN, Esq.,
9 STEVEN P. FRANTZ, Esq.,
10 Newman & Holtzinger,
11 Washington, D.C.
12

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:

20 LANNY ALAN SINKIN,
21 3022 Porter St. N.W., #304
22 Washington, D.C. 20008
23 Representative for Citizens Concerned About
24 Nuclear Power.
25

1 THURSDAY, AUGUST 8, 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, } 14838 14871

8 ERIC H. JOHNSON and }

9 GEORGE L. CONSTABLE }

10
11
12 EXHIBITS:

FOR ID.

IN EVD

13 Applicants' No. 73

14808

14809

14 Applicants' No. 74

14809

14810

15 Applicants' No. 75

14810

14810

16 Applicants' No. 76

14811

14811

17 CCANP Exhibit 121

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14837

18 Staff Exhibit 137

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19 Staff Exhibit 136

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14859

20 Staff Exhibit 138

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21 Staff Exhibit 139

14862

14863

22 Staff Exhibit 140

14863

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23 Staff Exhibit 141

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24 CCANP Exhibit 134

15005

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P R O C E E D I N G S

JUDGE BECHHOEFER: On the record.

Good morning, ladies and gentlemen.

At the outset this morning, after any preliminary matters, I guess we should have the oral argument that the parties stipulated to on the materiality of CCANP Exhibit 121. That's the memo from Dr. Broom.

MR. PIRFO: If I may, Mr. Chairman, quickly before we do that. Joining us at counsel table today is a Mr. William Brown, regional counsel for Region IV. Mr. Brown is a member of the Bars of Oklahoma, Texas and the District of Columbia and he would hereby enter his appearance in this proceeding.

JUDGE BECHHOEFER: All right.

MR. PIRFO: Thank you.

JUDGE BECHHOEFER: Are there other preliminary matters before we get into the argument on Exhibit 121?

MR. GUTTERMAN: I do have one. Last week I had agreed to provide for the record copies of the written reports filed by Houston Lighting & Power Company on the three items that were reported that came out of the Quadrex report, the computer code verification issue, the shielding calculation classification and the heating, ventilating and air

1 conditioning system.

2 I have those now and am prepared to offer them
3 I guess as exhibits. And what I would suggest we do is
4 combine all of the reports on computer code verification
5 as one exhibit and all the reports on HVAC as another
6 exhibit. I believe there was only one written report on
7 the shielding analysis just explaining that it was
8 determined not to be reportable, as a third exhibit.

9 So that the first Exhibit 73 would consist of
10 eight letters from Houston Lighting & Power Company to
11 NRC Region IV, including a first interim report dated
12 June 5th, 1981, a second interim report dated August
13 27th, 1981, a third interim report dated December 18th,
14 1981, a fourth interim report dated April 22nd, 1982, a
15 fifth interim report dated September 13th, 1982, a sixth
16 interim report dated December 22nd, 1982, a seventh
17 interim report dated June 13th, 1983, and a final report
18 dated October 14, 1983. That would be Applicants'
19 Exhibit No. 73.

20 (Applicants' Exhibit No. 73 marked for
21 identification.)

22 MR. GUTTERMAN: I'd move that Applicants'
23 Exhibit 73 be admitted into evidence.

24 MR. SINKIN: No objection.

25 MR. REIS: No objection.

1 JUDGE BECHHOEFER: The Applicants' Exhibit 73
2 will be admitted.

3 (Applicants' Exhibit No. 73 admitted in
4 evidence.)

5 MR. GUTTERMAN: The second exhibit I have,
6 Applicants' Exhibit 74, consists of eight letters from
7 Houston Lighting & Power Company to NRC Region IV on the
8 subject of heating, ventilation and air conditioning
9 design. The first one is a June 9th, 1981 first interim
10 report, then a second interim report dated July 29,
11 1981, and a third interim report dated October 23,
12 1981. Then a report entitled Final Report Concerning
13 Fuel Handling Building, HVAC Control Air System, dated
14 April 8, 1982. Then a report dated May 26, 1982,
15 entitled Fourth Interim Report Concerning Heating,
16 Ventilation and Air Conditioning Design. Then a fifth
17 interim report concerning the heating, ventilation and
18 air conditioning design-the use of fail open isolation
19 dampers, dated August 6, 1982. Then a report entitled
20 Final Report Concerning Heating, Ventilation, and Air
21 Conditioning Design, dated October 20, 1982. And
22 finally a report entitled Supplemental Report Concerning
23 the Heating, Ventilation and Air Conditioning Design
24 Deficiency, dated May 17, 1984.

25 (Applicants' Exhibit No. 74 marked for

1 identification.)

2 MR. GUTTERMAN: I would move that Applicants'
3 Exhibit 74 be admitted into evidence.

4 MR. SINKIN: No objection.

5 MR. REIS: No objection.

6 JUDGE BECHHOEFER: Applicants' Exhibit 74 will
7 be admitted.

8 (Applicants' Exhibit No. 74 admitted in
9 evidence.)

10 MR. GUTTERMAN: Applicants' Exhibit 75
11 consists of one letter from Houston Lighting & Power
12 Company to NRC Region IV, dated June 5th, 1981. The
13 subject is final report concerning shielding analysis
14 verification.

15 (Applicants' Exhibit No. 75 marked for
16 identification.)

17 MR. GUTTERMAN: I move that Applicants'
18 Exhibit 75 be admitted into evidence.

19 MR. REIS: No objection.

20 MR. SINKIN: No objection.

21 JUDGE BECHHOEFER: Applicants' Exhibit 75 will
22 be admitted.

23 (Applicants' Exhibit No. 75 admitted in
24 evidence.)

25 MR. GUTTERMAN: The other document I'd like to

1 have marked is Applicants' Exhibit 76. It's a response
2 to notice of violation dated September 9, 1982, and it's
3 also a letter from Houston Lighting & Power Company to
4 NRC Region IV responding to notice of violation 82-02.

5 (Applicants' Exhibit No. 76 marked for
6 identification.)

7 MR. GUTTERMAN: I would move that Applicants'
8 Exhibit 76 be admitted into evidence.

9 MR. REIS: No objection.

10 MR. SINKIN: This is the response to 82-02?

11 MR. GUTTERMAN: Yes.

12 MR. SINKIN: No objection.

13 JUDGE BECHHOEFER: Applicants' Exhibit 76 will
14 be admitted.

15 (Applicants' Exhibit No. 76 admitted in
16 evidence.)

17 MR. GUTTERMAN: That's all I have, Mr.
18 Chairman.

19 JUDGE BECHHOEFER: Okay. Is there anything
20 further before we go on to the argument on CCANP 121?

21 MR. SINKIN: Yes, Mr. Chairman, I have a
22 couple of preliminary items.

23 JUDGE BECHHOEFER: Okay.

24 MR. SINKIN: First of all, I'd like to take
25 one more run at Mr. Powell.

1 Given what was testified yesterday, it seems
2 to me Mr. Powell does provide information that closes a
3 number of gaps in the record. We know that Mr. Powell
4 apparently conducted some kind of review beginning on
5 May the 7th or thereabouts as to which items in the
6 Quadrex report had previously resulted in 50.55(e)
7 reports to the Nuclear Regulatory Commission. We did
8 have a document that seemed to be that kind of analysis,
9 but the witness hadn't recognized that particular
10 document.

11 So, the only thing in the record is Mr.
12 Robertson's side of that conversation as to what really
13 went on inside the IRC or at least inside Mr. Powell's
14 office to determine what had been reported previously to
15 the NRC and how that related to what was in the Quadrex
16 report. We do consider that a significant indicator of
17 how the Quadrex report should have been treated by HL&P.

18 The second thing is the instructions given to
19 Mr. Powell regarding how to report to the NRC and what
20 to report to the NRC and what he proceeded to do.

21 The third thing is the actual performance of
22 the IRC in reviewing the reportable items and any review
23 of items that in theory were not reported, given we have
24 varying testimony as far as we are concerned as to what
25 the reports to the Nuclear Regulatory Commission really

1 covered. At least according to some of the testimony,
2 there were items considered by the IRC that were not
3 reported to the NRC. How they considered those --

4 Quite frankly, we think Mr. Robertson is
5 simply wrong on one point that's reflected in the
6 minutes of the IRC. We think the IRC did indeed review
7 the decisions of the Houston Lighting & Power review
8 team on the ones that were reported and made their own
9 independent decision and recorded it as such in the
10 minutes when they said this item is reportable pursuant
11 to 10CFR50.55(e). And we think that that demonstrates
12 the accurate and correct process that should have been
13 used and that Mr. Robertson wrongly characterized that
14 as the process that wasn't used.

15 And the third or the final item on Mr. Powell
16 would be what the real knowledge of the members of the
17 IRC was regarding the Quadrex report. Since we haven't
18 had a witness yet who was present at the meetings of the
19 IRC to testify as to what, if any, discussions took
20 place at those meetings regarding the Quadrex report and
21 its contents or review of the Quadrex report by any
22 member of the IRC, we think Mr. Powell fills in all of
23 those gaps that no witness to date can fill and would,
24 therefore, move that the twice quashed subpoena be
25 unquashed.

1 JUDGE BECHHOEFER: Mr. Gutterman or Axelrad?

2 MR. GUTTERMAN: Well, if the Board really
3 wants to hear our views, I'll be happy to express them.

4 Our view is that this is a matter the Board
5 has decided twice. That the things that CCANP has just
6 pointed to are in no respects material to the decision
7 the Board has to reach.

8 That to the extent CCANP says that Mr.
9 Robertson was wrong about something, A, it's not
10 material, and, B, there's no basis for it. There's
11 absolutely no basis for saying Mr. Robertson's wrong.
12 It's all just idle speculation and all we're seeking to
13 do in trying to get Mr. Powell is to go on a fishing
14 expedition. There's no indication that Mr. Powell's
15 going to give any meaningful testimony and, as I said,
16 the specific matters referenced by CCANP, none of them
17 would be material to the decision the Board has to
18 make.

19 MR. REIS: Mr. Chairman, this is, as Mr.
20 Gutterman indicated, the second time we've had a motion
21 for reconsideration. Of course, each time there's a
22 motion for reconsideration on the same matter, the
23 burden gets higher and Mr. Sinkin has not sustained that
24 burden. What he wants is only surmise.

25 If he had conducted discovery, he would have

1 known whether Mr. Powell would have testified the way he
2 wants and have a basis, maybe a basis originally for you
3 to issue a subpoena. What he wants to do is now extend
4 discovery. There is no basis and nothing he has said
5 indicates a basis.

6 Further, the matters he mentioned are very
7 tangential to matters that have to be decided by this
8 Board. They are not really probative of the matters and
9 are not material.

10 Therefore, for those and the other reasons
11 we've given before on this subject, we feel this motion
12 should not be granted.

13 MR. SINKIN: A very quick response, just to
14 the idea that the statement about Mr. Robertson is idle
15 speculation. I'm going by the actual wording of each of
16 the IRC minutes. In each of those minutes the statement
17 is made "this item is potentially reportable to the
18 Nuclear Regulatory Commission." Now, if the
19 determination had been made and it was not the role of
20 the IRC to review that determination, then there would
21 be no reason for that statement to be in the minutes.

22 The second thing is --

23 JUDGE BECHHOEFER: Why is that material? And
24 I'm not saying relevant now, but why is it material to
25 what we have to decide?

1 MR. SINKIN: It shows that in the cases where
2 the review team decided to report, that that decision
3 was still reviewable by the Incident Review Committee
4 and could have even been reversed by the Incident Review
5 Committee and that that is the real process that was in
6 place at the South Texas Project during this time. Mr.
7 Robertson has said that's not the process, they didn't
8 review decisions by the review committee.

9 That means that the way Mr. Robertson
10 describes it, the review committee would have acted
11 perfectly legitimately in one sense not to even forward
12 their reportable findings to the IRC because they had
13 the authority to make the decision to report and no one
14 reviewed that decision. That's simply not the case. We
15 want clearly to demonstrate what that procedure should
16 have been, how it operated even on reportable items.

17 JUDGE BECHHOEFER: Of course, the memos you're
18 referring to were after the report had already been
19 made, after the --

20 MR. SINKIN: I understand the report had
21 already been made. But what we're saying is that the
22 minutes reflect that the IRC reviewed whether that
23 report should have been made. That's the way we read
24 them. Mr. Robertson says no, that's not what happened.

25 MR. GUTTERMAN: Obviously, Mr. Chairman,

1 there's no issue in controversy about whether those
2 reports should have been made. It's totally
3 immaterial. And obviously I don't agree with what those
4 memoranda stand for either, but --

5 MR. REIS: Or the meaning of those words.

6 MR. GUTTERMAN: Yes.

7 MR. SINKIN: But then if we want to clear that
8 up, it's the chairman of the IRC. That's our opinion.

9 MR. GUTTERMAN: Our point is that it's
10 immaterial. There is no dispute about the reportability
11 of those particular items.

12 MR. SINKIN: I'm not sure that's really the
13 critical argument on calling Mr. Robertson anyway. I
14 mean, the idea of what the IRC knew and didn't know
15 about Quadrex and how they made their decisions and what
16 they really reviewed are far more important than that
17 particular aspect of the procedure.

18 JUDGE BECHHOEFER: I assume you meant Powell.

19 MR. SINKIN: Powell. Mr. Robertson we got.
20 Thank you.

21 JUDGE BECHHOEFER: The Board will not reverse
22 its decision. We don't think that there's enough
23 materiality shown to the items mentioned.

24 MR. SINKIN: We have one other item, Mr.
25 Chairman, the calling of Mr. Jack Newman as a witness in

1 the proceeding.

2 The Board had ruled in the beginning of the
3 proceeding that attorneys would not be called subject to
4 what developed in the testimony during the hearing. The
5 only point that we would want to call Mr. Newman on is
6 the apparent contradiction between Mr. Goldberg's
7 testimony at the Public Utility Commission about how the
8 decision to replace Brown & Root was made versus the
9 versions given in this hearing by Mr. Jordan, Mr. Oprea
10 and Mr. Goldberg.

11 One particular item stands out. Mr. Goldberg
12 testified at the Public Utility Commission that "We
13 basically individually," speaking of Mr. Oprea, Mr.
14 Newman and himself, Mr. Goldberg said, "We basically
15 individually prepared rating sheets as to how we saw the
16 various contractors in terms of their attributes, in
17 terms of depth, experience, people they were willing to
18 commit to our particular project, the ability to commit
19 them in the time frame that was necessary to support our
20 interests."

21 He then says a bit later, "After we went
22 through our ratings, we met to exchange our view. As to
23 how we saw their attributes. We subsequently met with
24 Mr. Don Jordan and reviewed all the information with Mr.
25 Jordan. So, in effect, the final deciding body became

1 four, Mr. Jordan, Mr. Oprea, Mr. Newman and myself."

2 Now, certainly on the point of the preparation
3 of the rating sheets, Mr. Oprea said the rating sheets
4 were never used. Mr. Goldberg at the PUC says everyone
5 filled one out. Mr. Jordan, Mr. Oprea, Mr. Goldberg say
6 that Mr. Newman's role was simply in commercial
7 licensing -- commercial and licensing. In this
8 testimony Mr. Goldberg says there was a team of four and
9 they all rated the companies in all areas and then
10 discussed their overall ratings with each other.

11 We think the person to clear up what Mr.
12 Newman did or did not do is Mr. Newman and would
13 therefore ask that he be called.

14 JUDGE BECHHOEFER: Mr. Axelrad or Gutterman?

15 MR. AXELRAD: Mr. Chairman --

16 JUDGE BECHHOEFER: Mr. Frantz, too.

17 MR. FRANTZ: Thank you, Mr. Chairman.

18 MR. AXELRAD: It's unfortunate that Mr. Sinkin
19 didn't tell us he was going to bring up this matter so
20 that we would have equally been able to review the
21 record as he did with respect to the specific matters
22 involved. However, on the basis of what he has
23 presented, I'm fairly confident I can satisfy the Board
24 that they should not decide to call Mr. Newman without
25 going back over a lengthy review of the record.

1 I will not bother repeating all the arguments
2 that were made previously about the high standard that's
3 required in order to call an attorney and whether or not
4 he would be able to make a unique contribution to the
5 record. It is so clear on the basis of what Mr. Sinkin
6 has described that what he has indicated would not be
7 sufficient to call any witness, let alone an attorney.

8 What he cites as an apparent contradiction is
9 obviously no contradiction at all. As Mr. Oprea has
10 testified very clearly, Mr. Newman prepared a draft
11 replacement report back on September 8th and attached to
12 that a draft rating sheet. He indicated in that cover
13 letter which is part of the record that he himself had
14 filled out that rating sheet for his own purposes, but
15 that he was an amateur and that he was not providing it
16 to the members of the -- to Mr. Oprea and Mr. Goldberg
17 who were making the basic recommendation to the CEO of
18 the company. Mr. Oprea testified that he himself did
19 not choose to use that particular rating sheet, that he
20 had his own mechanisms which he thought were better to
21 evaluate the replacement proposals.

22 Whether or not Mr. Goldberg himself filled out
23 a rating sheet is obviously irrelevant. There is no
24 indication at all that Mr. Newman's rating sheet that he
25 had filled out for his own purposes was ever used.

1 Obviously, there is information on the record that at
2 the meeting held the morning of September 12th, Mr.
3 Jordan did ask individuals for their views as to the
4 contractors that were being considered. Views were
5 exchanged at that time. There is no indication that
6 numerical ratings were used or that they were at all
7 exchanged among the various participants in the
8 meeting.

9 It is clear from all the testimony that Mr.
10 Newman's contribution was based upon the regulatory
11 matters that he was being asked to advise on and various
12 contractual matters. To the extent that he might also
13 have indicated views on the overall merits of the
14 contractors, that would not have been unusual in terms
15 of an attorney's contribution to the decision that was
16 being made.

17 All in all, there is no controversy in the
18 record, there is nothing which even if it were to be
19 decided in the manner that Mr. Sinkin has suggested
20 would at all affect any of the basic matters that the
21 Board is considering here. There is no indication at
22 all that the decision was made, that the replacement
23 decision was made by anyone other than the chief
24 executive officer of the company based upon information
25 that he obtained from the participants in the meeting.

1 And Mr. Sinkin's request that Mr. Newman be called would
2 contribute nothing at all to the record.

3 MR. REIS: Mr. Chairman, this is another
4 motion for reconsideration. And, of course, on motions
5 for reconsideration, the burden is very high. Mr.
6 Sinkin hasn't shown --

7 JUDGE BECHHOEFER: This isn't really a motion
8 for reconsideration because we did state that Mr. Sinkin
9 could later come back and show that if the record wasn't
10 adequate, the record provided by other witnesses, that
11 he could renew his motion. But be that as it may --

12 MR. REIS: I think it is in essence a motion
13 for reconsideration and I think he has to sustain the
14 burden for a motion for reconsideration in this sort of
15 matter. Be that as it may, what he wants Mr. Newman for
16 is not probative.

17 I've listened to what Mr. Sinkin said just now
18 and even if the Board says it is inconclusive on all of
19 these issues or if it decided each of those issues
20 either way, way A, way B, if there was a controversy in
21 the testimony, it wouldn't make any difference to the
22 Board's determination in this proceeding one whit. It
23 has nothing to do with what the Board ultimately has to
24 find. I don't understand how it could have anything to
25 do with what this Board has to find.

1 If it decided A or if it decided B would make
2 no difference. If it said the record was not clear, it
3 would make no difference on these issues. They're just
4 not -- it's not probative enough to the issues to
5 require Mr. Newman to appear.

6 JUDGE BECHHOEFER: Mr. Sinkin?

7 MR. SINKIN: No further response, Mr.
8 Chairman.

9 JUDGE BECHHOEFER: We do not think an adequate
10 basis has been set forth to call Mr. Newman, so we will
11 not do so.

12 MR. SINKIN: One additional matter, Mr.
13 Chairman.

14 For the past three days we have been
15 discussing with the Applicants Mr. Thrash and the
16 minutes. And I think it would be our intention at the
17 first break to request a subpoena for Mr. Thrash to come
18 and testify about the notes that he took and how they
19 were typed up and whether they were his best
20 recollection of the meeting. We feel like the record
21 needs to be clarified on that point because so many
22 people have speculated as to what Mr. Thrash did or did
23 not do when he took his minutes.

24 The second item along those same lines, during
25 Mr. Frazar's testimony it came out for the first time

1 that we have ever heard that Mr. Ulrey of the quality
2 assurance department was provided with a copy of the
3 Quadrex report at approximately the time that Quadrex
4 delivered the report to Houston Lighting & Power. Now,
5 since the quality assurance response to the Quadrex
6 report is a critical item in this entire proceeding, we
7 think that Mr. Ulrey too is now a material and
8 significant witness in this proceeding and would intend
9 to ask for a subpoena to bring Mr. Ulrey to the
10 proceeding, assuming the Applicants wouldn't voluntarily
11 produce him.

12 That's all we have, Mr. Chairman.

13 JUDGE BECHHOEFER: The Board recognizes that
14 under Commission procedures we would normally issue the
15 subpoena on a showing of general relevance which we
16 think has been shown. But in the interest of
17 expedition, we wondered whether we could get, well, the
18 Applicants' opinion really, they would be representing
19 those two witnesses, Applicants' opinion as to whether
20 they would move to quash.

21 I don't think we can delay indefinitely. We
22 would like to -- if either of them were to be brought
23 in, we would have to figure a schedule for that. So,
24 are you prepared to address those at the moment or would
25 y. like a little time?

1 MR. AXELRAD: Mr. Chairman, we're not prepared
2 to address it at this minute. I suggest that we
3 would -- I can tell you we would move to quash. But I
4 really think maybe the most effective way to do this
5 would be to after the next recess have an oral argument
6 on the matter.

7 We have very serious questions with respect to
8 an intervenor's ability at any time during the
9 proceeding that he thinks some additional information
10 has come up that he's interested in to be able to
11 identify additional witnesses. He was supposed to
12 identify witnesses to be subpoenaed back on June 26th
13 when all of us were. And I do not believe that he has
14 the ability anytime the record develops on a matter that
15 he did not expect or that he does not like to simply
16 request a subpoena be issued and thereby increase the
17 number of witnesses he's going to be provided.

18 He has finished his case. We are now going
19 into the Staff's case. He is not entitled to present a
20 rebuttal case or a supplemental case of any kind.

21 Now, those are all arguments in addition to
22 the lack of merit for subpoenaing these particular
23 people. But, in any event, I think that should be
24 argued after the next recess and I think that at the
25 very least Mr. Sinkin should be required, just as he had

1 been before June 26th, to provide something in the
2 essence of an offer of proof as to what he thinks those
3 particular witnesses would materially contribute to the
4 record and we could argue about whether those should be
5 brought in, in addition to whether or not he should be
6 able to bring in any evidence at all.

7 JUDGE BECHHOEFER: Do you have any views, Mr.
8 Reis?

9 MR. REIS: Yes. I think it's a little late
10 for discovery and I think these are discovery matters.
11 If Mr. Sinkin had thought -- had conducted discovery, he
12 might have found out these matters and been able to show
13 and listed them originally. There was an order to list
14 witnesses. He did not list these people and now he says
15 he wants these people. Well, he had a duty to this
16 Board and to the proper workings of the Commission in
17 the Commission's adjudicatory processes to find out who
18 his witnesses were ahead of time. There is nothing here
19 that has developed that is that surprising that could
20 not have been gotten in discovery. There is no great
21 revelation.

22 Further, I don't know whether these things
23 rise to the level, and, of course, that's for the motion
24 to quash and I have to see what the arguments are on
25 both sides, but as Mr. Sinkin outlined it, I'm not sure

1 it's that probative, that it could change anything,
2 especially at this stage of the proceeding to ask for it
3 in the middle of the proceeding where he was instructed
4 to list his witnesses ahead of time and did not list
5 these people, did not seek them. He listed a number of
6 people and he had a duty at that time to list the people
7 he wanted and now he comes in and he has to make a show
8 this is absolutely necessary for a proper decision in
9 this case and I don't think he's done that.

10 JUDGE BECHHOEFER: The Board will defer to
11 following the next break an oral argument on this
12 subject. But we would like the parties to be prepared
13 to address in some detail either the contribution or the
14 lack of contribution which Mr. Thrash would make if he
15 were to be called. So, with that --

16 MR. AXELRAD: Okay, Mr. Chairman. If we are
17 to do that, I would just like to make sure that we
18 understand exactly what it is that Mr. Sinkin is going
19 to be talking about. Is he going to be talking about
20 the notes that Mr. Thrash took that eventually he used
21 for the purposes of preparation of the management
22 committee minutes of April 27th and June 26th? Are
23 those the two things we're talking about?

24 MR. SINKIN: All the ones that are already in
25 the record that Mr. Thrash --

1 MR. AXELRAD: Could you identify those for me?
2 I don't know what you have in mind. There are any
3 number of things which are not in the record in that
4 they have not been admitted in evidence. Are you
5 talking about things that have been admitted in
6 evidence?

7 MR. SINKIN: Yes, things that have been
8 admitted in evidence.

9 MR. REIS: Not just those that are marked for
10 identification?

11 MR. AXELRAD: Okay, maybe we better understand
12 each other. There were minutes of the management
13 committee which I believe have been admitted into the
14 record --

15 MR. SINKIN: I would intend to ask Mr. Thrash
16 about any of the minutes that the witnesses have been
17 questioned about. Let me approach it that way. So that
18 there will be some that are actually in evidence, there
19 will be some that are probably traveling with the record
20 marked for identification, there may even be some that
21 have not been introduced at all.

22 MR. AXELRAD: Well, we have no idea what we're
23 talking about, Mr. Chairman. I think if you want us to
24 address that matter in detail, Mr. Sinkin should be
25 required to identify which notes it is that he wants us

1 to talk about.

2 MR. SINKIN: Notes provided by the Applicants
3 in response to the Board's order for discovery that are
4 identified as notes of Mr. Thrash. You provided a list
5 and on that list there's every one that's Mr. Thrash
6 says so.

7 MR. AXELRAD: Not all of those have been
8 discussed in the hearing.

9 Mr. Chairman --

10 MR. REIS: We certainly need an offer of proof
11 here, Mr. Chairman, and we haven't had an offer of
12 proof.

13 JUDGE BECHHOEFER: What the Board was going to
14 suggest was that we have this argument right after lunch
15 and that by that time Mr. Sinkin be able to specify the
16 exact documents, notes upon -- the precise ones upon
17 which he wishes and in essence the aspects of those
18 notes which he believes the record needs further
19 enhancement or explanation.

20 MR. AXELRAD: Right. Mr. Chairman, what I'm
21 suggesting, we need that identification sometime before
22 the argument so we can be prepared to argue it. It will
23 not help us if he identifies it at the argument and we
24 haven't reviewed them.

25 So, if he can identify that for us now or at

1 the next recess, that maybe we'll be able to argue that
2 at lunchtime. But we need the identification before the
3 argument, not during the argument.

4 MR. SINKIN: I'll try and do that at the next
5 recess, Mr. Chairman.

6 JUDGE BECHHOEFER: Right. Okay.

7 Should we go on to CCANP 121 materiality? I
8 guess, Mr. Sinkin, you can lead off on that.

9 (No hiatus.)
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1 MR. SINKIN: Yes, Mr. Chairman.

2 First of all, if Mr. Oprea had recalled this
3 conversation and this document records that conversation
4 and this document had been moved in through Mr. Oprea, I
5 don't think there's any question that would have come in
6 in two areas. It would have come in as showing his view
7 of the Quadrex audit and what it represented to him, and
8 it would have come in as showing his -- the role of the
9 Quadrex audit in the removal of Brown & Root, and it
10 would have come in on a third ground, perhaps, as showing
11 the final stages of the removal of Brown & Root, this
12 sort of last chance phone call from Brown & Root to HL&P,
13 as to how the decision to remove Brown & Root was made.

14 We think the document is material to all three
15 of those points, and for that reason should be admitted
16 into evidence.

17 I can point to specific lines of the document,
18 if that would help. The first line is the reason for the
19 call, Mr. Broom is calling Mr. Oprea to suggest an
20 alternate plan to the replacement of Brown & Root. Then
21 in the second paragraph, Mr. Oprea begins to list the
22 reasons that the decision to remove Brown & Root were
23 made; Mr. Oprea states his own conclusion that the
24 engineering was not well integrated between disciplines;
25 he refers immediately thereafter to the Quadrex audit and

1 to the 50.55(e) items reported since the order to show
2 cause.

3 He then lists further reasons why Brown & Root
4 was going to be removed. And the last paragraph on the
5 first page we find significant in that he stated that it
6 was a -- he stated that they had considered many
7 alternatives but felt that a significant change on the
8 engineering side was necessary because Region IV,
9 obviously referring to the NRC, was aware of the Quadrex
10 audit and was looking very carefully for a significant
11 change, which is a documentation of an attitude by Region
12 IV related to the Quadrex audit and Mr. Oprea's position
13 vis-a-vis Region IV and how he thought they ought to be
14 responding to Region IV.

15 For all of the above reasons, we think the
16 document should come into evidence, Mr. Chairman, as
17 material.

18 JUDGE BECHHOEFER: Mr. Axelrad.

19 MR. AXELRAD: Yes. Mr. Chairman, Section
20 2.743-B of the NRC regulation permits admissibility only
21 of relevant and material evidence which will not be
22 unduly repetitious.

23 CCANP 121 contains much irrelevant information,
24 some relevant information which is basically repetitious
25 and some information which is at best marginally

1 relevant. In any event neither the memorandum itself nor
2 any portion thereof when read in context of the
3 memorandum and the overwhelming evidence in the record
4 would contribute any additional material evidence to the
5 record.

6 As a whole, the memorandum simply sets forth a
7 third party's recitation of its proposal for an action
8 which HL&P never took, namely retaining another architect
9 engineer in a quote "overlord" close quote position over
10 Brown & Root.

11 That HL&P did not take that action and the
12 reasons it did not take that action are wholly irrelevant
13 and immaterial to this proceeding. The Board has already
14 ruled that evidence containing -- concerning HL&P's
15 choosing between the various architect engineers it was
16 considering to replace Brown & Root would not contribute
17 to the record, and would not be admitted. Evidence
18 concerning a last minute substitute proposal by Brown &
19 Root after the replacement decision had been made is
20 obviously even less worthy of admisibility.

21 CCANP's first reason for indicating that it
22 wished this material in the record is that apparently
23 states perhaps reasons for termination of Brown & Root
24 and his view of the Quadrex audit. That statement in the
25 second paragraph of CCANP 121, even if accurate, would

1 hardly contribute materially to the record.

2 As the second paragraph begins, it states
3 George Oprea responded by recounting the events that led
4 HL&P to the present decision that Brown & Root
5 engineering simply cannot support the field activities.
6 That's exactly what the record to date contains; it is
7 clear that that was the basic reason why HL&P chose to
8 replace Brown & Root. At best the information contained
9 in that paragraph would be duplicative and not contribute
10 materially to the record.

11 The last paragraph on page one cited by Mr.
12 Sinkin, he apparently believes that somehow the reference
13 to Region IV is a useful contribution to this record. At
14 most, what that paragraph indicates is that part of the
15 reason for Brown & Root's termination was HL&P's belief
16 that Region IV was aware of the Quadrex report and was
17 looking for a significant change. Even if true, that
18 statement would be immaterial. A willingness by the
19 licensee to take action that a regulatory agency would
20 deem desirable is scarcely novel.

21 But the statement is quite immaterial when
22 viewed in context. Obviously, the previous paragraph,
23 the second paragraph in the memorandum recited the basic
24 reasons for Brown & Root's termination; HL&P's view that
25 Brown & Root's engineering could not support field

1 activities. The record amply demonstrates that Region IV
2 views, even if fairly represented in this memorandum,
3 could not have been a significant factor.

4 The record as the Board will recall shows all
5 of the steps that HL&P took in replacement of Brown &
6 Root over the period of July, August and September,
7 including sending out requests for proposals, reviewing
8 the responses, evaluating them, and scheduling meetings
9 with the other owners with the HL&P's board of directors
10 and the chief executive officers, all of which took place
11 on a relatively orderly and well planned basis.

12 The meeting with Region IV which took place
13 around September 8th could hardly have been influential.
14 Considering the potential cost and scheduling impacts of
15 replacing an architect engineer and construction manager,
16 its hardly credible to believe that some Region IV
17 expectation of a change could have been pivotal in HL&P's
18 HL&P's decision, particularly since there's absolutely no
19 record in the record that Region IV either suggested or
20 expected that change would take place. Thus at most, the
21 paragraph would imply that Region IV reacted fairly to a
22 proposed change when preliminarily informed by HL&P.
23 It's hard to see how such a statement could materially
24 contribute to this record.

25 And finally, Mr. Sinkin indicates that somehow

1 this memorandum is relevant, material, because it says
2 something about the final stages of the Brown & Root
3 replacement process. Obviously Brown & Root as the
4 evidence in the record show had been informed on
5 September 15th that it was going to be replaced; the fact
6 that it made a last minute effort to attempt to influence
7 HL&P to reach some other decision would hardly contribute
8 to this record.

9 MR. REIS: Mr. Chairman, looking at this
10 memorandum, the only matter that I could see that it
11 would be probative of is not one that Mr. Sinkin
12 mentioned, but the fact that HL&P had -- when HL&P made
13 its decision to relieve Brown & Root of the engineering
14 activities on this project, there's a lot of evidence in
15 the record already on that and this would be merely
16 cumulative of that, that it happened at the end of
17 September. The other matters are -- yes, this is a
18 genuine memorandum, yes it's a genuine confidential
19 memorandum, but the other matters just won't -- having
20 this memorandum in the record just doesn't add anything
21 material to the record as to what were the reasons for
22 the removal of Brown & Root, how -- whether Quadrex
23 influenced that or not; it's the opinions of Mr. Broom to
24 Mr. Rice, and/or what what his purported opinions were at
25 that time, and shows nothing more.

1 In considering it as a whole, considering the
2 probative value and the fact -- what matters are already
3 contained in the record, we see no reason for this to be
4 admitted.

5 JUDGE BECHHOEFER: The Board has considered
6 this document and we think we will admit it for what it's
7 worth. So CCANP 121 is admitted.

8 (CCANP Exhibit No. 121
9 received in evidence.)

10 JUDGE BECHHOEFER: Are we ready to go to the
11 staff?

12 MR. PIRFO: Yes, we're ready.

13 Thank you, Mr. Chairman. The staff would now
14 call Mr. Eric Johnson, Mr. George Les Constable, Mr.
15 Robert G. Taylor and Mr. Robert F. Heishman to the stand,
16 please.

17 JUDGE BECHHOEFER: From left to right, who are
18 these gentlemen.

19 MR. PIRFO: I was going to have them identify
20 themselves right now.

21 Starting with Mr. Heishman} on my right, would
22 you each give your full name and titles, please.

23 MR. HEISHMAN: My name is is Robert F.
24 Heishman, I'm Chief of the Reactor Construction Programs
25 Branch in Washington.

1 MR. JOHNSON: I'm Eric M. Johnson, Acting
2 Deputy Director of the Division of Reactor Safety and
3 Projects, and Chief Reactor Project Branch, 1, Region IV.

4 MR. TAYLOR: I'm Robert G. Taylor, reactor
5 inspector, Region IV.

6 MR. CONSTABLE: I'm George Leslie Constable.
7 I'm the Chief of the Reactor Project Section C, NRC
8 Region IV.

9 MR. PIRFO: Mr. Taylor's already been sworn in
10 this proceeding. I'm sorry, the other witnesses have
11 not.

12 JUDGE BECHHOEFER: That is correct.

13
14 Whereupon,

15 ERIC H. JOHNSON, GEORGE L. CONSTABLE

16 ROBERT F. HEISHMAN AND ROBERT G. TAYLOR
17 were called as witnesses on behalf of the Staff and,
18 having been duly sworn, were examined and testified
19 as follows:

20 DIRECT EXAMINATION

21 By Mr. Pirfo:

22 Q Mr. Heishman, starting with you first, do you
23 have in front of you a document entitled the testimony of
24 Robert F. Hishman consisting of two pages with the
25 statement of professional qualifications attached as well

1 as an additional attachment of fifteen pages?

2 A (By Mr. Heishman) Yes, sir

3 Q Was this testimony prepared by you under your
4 control and/or direction?

5 A Yes, it was.

6 Q Do you have any additions, corrections or
7 modifications to this testimony at this time?

8 A No, sir.

9 Q And is this testimony true and correct to the
10 best of your knowledge, information and belief?

11 A It is.

12 Q Mr. Taylor, do you have in front of you a
13 document purporting to be the testimony of Robert G.
14 Taylor consisting of 55 sequentially numbered pages?

15 A (By Mr. Taylor) I do.

16 Q Was this testimony prepared by you or under
17 your direction and control?

18 A It was.

19 Q Do you have any modifications, corrections, or
20 additions to this document at this time?

21 A Yes, I do.

22 Q What are those, sir?

23 A I would like to make a few changes, beginning
24 on page 8, answer 21, in the 9th line, I would like to
25 insert the word, words, "provided by" in front of

1 "Quadrex" and delete the word "from."

2 On page ten, answer 23, 6th line, I would like
3 to place a period after the word "reportable" and delete
4 the rest of that sentence.

5 On page 19, answer 53, in the first line, add
6 the word "appears" after the quote.

7 On page 20, answer 53, add to answer
8 53, the following: "Subsequent to filing this
9 testimony, it was pointed out that the term does appear
10 in the SRP at 9.2.1 in uncapitalized form as one of the
11 several methods of review to be performed.

12 I think I'll have to take it all over again.

13 MR. SINKIN: As it does appear in the SRP?

14 JUDGE BECHHOEFER: Better go farther back than
15 that.

16 Q (By Mr. Pirfo) Mr. Taylor; if you would go
17 back at the beginning and do it very slowly, I'd
18 appreciate it.

19 A (By Mr. Taylor) "Subsequent to the filing of
20 this testimony, it was pointed out that the term does
21 appear in the SRP at 9.2.1 in uncapitalized form as one
22 of the several methods of review to be performed." Are
23 you ready for the next one?

24 Q If you could give us the next change, please.

25 A Page 21, answer 55, in the first line, add the

1 word "of," O-F, after the word "practice."

2 On page 27, answer 72, 8th line, change the
3 page numbers referenced from 21 through 24, to 22 through
4 25. And that is all.

5 Q There's no other changes?

6 A There are no other changes.

7 Q Would these changes, Mr. Taylor, is this
8 testimony true and correct to the best of your knowledge,
9 information, and belief?

10 A It is.

11 Q Mr. Johnson and Mr. Constable, do you have in
12 front of you a document entitled "The Testimony of Eric
13 H. Johnson and George L. (Les) Constable" consisting of
14 13 sequentially numbered pages and two attachments of
15 three pages each, which purport to be your professional
16 qualifications?

17 A (By Mr. Constable) I do.

18 A (By Mr. Johnson) Yes.

19 Q Was this testimony prepared by you under your
20 control or direction, Mr. Johnson?

21 A (By Mr. Johnson) Yes.

22 Q Mr. Constable?

23 A (By Mr. Constable) Yes.

24 Q Do you have any additions, corrections, or
25 modifications to this testimony at this time?

1 A (By Mr. Johnson) Yes, sir, there are some.
2 Mr. Constable has the consolidated listing for both of
3 our changes.

4 Q If you would read them into the record, Mr.
5 Constable.

6 A (By Mr. Constable) On page one, answer A-1-A,
7 Mr. Johnson's title has changed, need to add, after
8 Region IV where it says "as branch chief," add in there
9 "Acting Deputy Director of the Division of Reactor Safety
10 and Projects, and as," and go on to say branch chief.

11 JUDGE BECHHOEFER: Acting deputy director.

12 MR. CONSTABLE: "Acting Deputy Director of the
13 Division of Reactor Safety and Projects and as."

14 Q (By Mr. Pirfo) Do you have the next change?

15 A (By Mr. Constable) Yes. At the end of that
16 same answer where it says my initials, EHJ, strike that
17 whole sentence.

18 Under answer A-1-B, the third line down is now
19 project section C as opposed to B, the same facilities
20 are involved, and at the end of that paragraph, also
21 strike the sentence that begins my initials GLC.

22 On page two, answer two at the end of the first
23 paragraph, strike the initials EHJ and GLC.

24 Page 3 at the end of the first paragraph,
25 strike the initials EHJ.

1 JUDGE LAMB: Excuse me. With respect to that,
2 it's not you have been branch chief and so on, that,
3 without the initials does not refer to both of you, does
4 it?

5 MR. CONSTABLE: No, it's not. Is not intended
6 to, we felt it was fairly obvious from the description
7 based on what we had said previously.

8 JUDGE LAMB: In some other answer.

9 MR. CONSTABLE: In some other answer, we're
10 adding the ame.

11 JUDGE LAMB: Fine.

12 A (By Mr. Constable) In question 3-B, on page
13 three, at the end of the first line, it's project section
14 C. And strike the initials GLC at the end of that
15 question.

16 Page 4, question five, there are two words that
17 are reversed; the sentence should read "how have you now
18 evaluated."

19 Next on the top of Page 8; in the first line,
20 strike the second word that after the word
21 "determination" and insert "of one of" and add in
22 parentheses, after the word items in that first line,
23 "computer program verification." And change the word
24 "were" to "as."

25 Next one is on page ten, first line, insert

1 after the word "my," "in my, G.L. Constable's view."

2 Page 11, answer ten, after the word "no,"
3 strike "as discussed above comma" and further down the
4 page, on page 11, where there's two A-12's, the first one
5 should be Q-12.

6 And on page 12, in answer 13, fourth line from
7 the bottom of the answer, that should be June 30 as
8 opposed to June 31.

9 JUDGE BECHHOEFER: I'm glad you made that
10 change. I was going to ask you the difference between
11 that and the February 31.

12 MR. CONSTABLE: The report was slipped a month
13 due to other things that were going on; we just
14 inadvertantly forgot to change the date.

15 A (By Mr. Constable) In answer 14, where it
16 refers to -- where it says "and will be documented in NRC
17 inspection report 85-07, that report has now been issued
18 and the date of that report is 7-25-85. And

19 I don't know if you want us to add our new
20 titles to our professional qualifications or not. We've
21 already said it in the --

22 JUDGE BECHHOEFER: Do you want to change that
23 sentence on page 12, at the bottom, to "has been
24 documented"?

25 MR. CONSTABLE: Has been document indeed

1 inspection report 85-07, issued 7-25-85.

2 Q (By Mr. Pirfo) Mr. Constable, if you will turn
3 your attention to Page 3 for a moment, about the third of
4 the way down, Q-3-B should that not be A-3-B?

5 A I thought so as we went over it. Yes, it
6 should.

7 Q Are there any other changes, Mr. Constable?

8 A None that I can think of.

9 Q Mr. Johnson?

10 A (By Mr. Johnson) No, sir.

11 Q Mr. Johnson, with these changes, is the
12 testimony true and correct to the best of your knowledge,
13 information and belief?

14 A (By Mr. Johnson) Yes.

15 Q Mr. Constable, with these changes is the
16 testimony true and correct to the best of your knowledge,
17 information and belief?

18 A (By Mr. Constable) Yes, it is.

19 MR. PIRFO: Mr. Chairman, if it please the
20 Board I would move at this time that the testimony of
21 Eric H. Johnson and George Les Constable, and the
22 documents entitled "Testimony of Robert J. Taylor" and
23 the "Testimony of Robert F. Heishman" with all
24 attachments be, with all professional qualification
25 attachments be bound into the record and admitted into

1 evidence as if red.

2 MR. GUTTERMAN: No objection.

3 MR. SINKIN: No objection, except subjecting
4 Mr. Taylor's testimony to the motion to strike that was
5 filed by CCANP earlier.

6 JUDGE BECHHOEFER: For purposes of
7 clarification, is the I&E guidance which is attached to
8 Mr. Heishman's testimony -- do you intend that to go in
9 now?

10 MR. PIRFO: No, that's why I said with the
11 professional qualification ttachments. I'm going to do
12 that right now.

13 JUDGE BECHHOEFER: Okay, the testimony will be
14 admitted into evidence and bound into the record as if
15 read.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

HOUSTON LIGHTING AND POWER COMPANY,
ET AL.

(South Texas Project, Units 1 & 2)

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)
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Docket Nos. 50-498
50-499

Testimony of Eric H. Johnson and George L. (Les) Constable

Q.1. Please state your name title and by whom you are employed.

A.1.a. My name is Eric H. Johnson. I am employed by the U.S. Nuclear Regulatory Commission, Region IV, as Branch Chief, Reactor Project Branch 1. A statement of my professional qualifications is attached hereto. My initials (EHJ) will follow those answers below attributable to me.

A.1.b. My name is George L. (Les) Constable. I am employed by the U.S. Nuclear Regulatory Commission, Region IV, as Section Chief, Project Section B, Reactor Project Branch 1. A statement of my professional qualifications is attached hereto. My initials (GLC) will follow my answers below.

Q.2. What is the purpose of this testimony?

A.2. The purpose of this testimony is to respond to the Board's Sixth Prehearing Conference Order, as amended, and to provide NRC Region IV management views with regard to application of 10 CFR 50.55(e) and on those other matters in issue. EHJ, GLC

Region IV testimony from the following inspectors addresses issues in the generally identified areas:

| | |
|---------------------|-----------------------------|
| Robert G. Taylor | Quadrex Reportability |
| Danny R. Carpenter | Competence of HL&P |
| Dan. P. Tomlinson | Competence of HL&P |
| Claude E. Johnson | Competence of HL&P |
| Donald L. Garrison | 50.55(e) Reporting/Trending |
| H. Shannon Phillips | 50.55(e) Reporting |
| Joseph I. Tapia | Soils |

*Mr. Phillips is also supplying separate testimony of how he learned of the Quadrex Report.

Q.3. Please describe your responsibilities and background as these relate to the purpose of this testimony?

A.3.a. I have been Branch Chief for Reactor Project Branch 1 since October

1983. The South Texas Project has been assigned to this branch during this entire period of time and I am responsible for the direction of NRC employees who inspect that facility. In addition, as a routine part of my duties, I am familiar with the documents and NRC filings related to the issues before the Board and am specifically familiar with NRC Region IV's interpretation of 50.55(e) reporting requirements. EHJ

Q.3.b. I was assigned to the position of Section Chief, Project Section B, Reactor Project Branch 1 on June 9, 1985. The South Texas Project is assigned to this section. Since my promotion was announced on May 2, 1985, I have coordinated the development of the overall Region IV preparation for Phase II of the hearings. During this time, working with the previous Section Chief (William A. Crossman) who retired on May 31, 1985, I have reviewed the filings before the Board and I have discussed the previous Region IV involvement with those involved at that time. Three of those individuals are now retired.

Prior to my assignment as Section Chief, during the period 1980 through 1984, I was the senior resident inspector assigned to a reactor under construction (Waterford). In that position, I routinely reviewed matters reported to the NRC in accordance with 10 CFR 50.55(e) and routinely discussed the NRC interpretation (dated 4/1/80) of that regulation with the construction permit holder. GLC

Q.4. Is it your view that, in the preparation of NUREG-0948, the NRC staff considered whether a significant breakdown in QA had occurred?

A.4 The Quadrex Report is an important document in that it contained over 300 separate findings which could have impacted the design of the South Texas Project and, hence, it's ability to safely operate. When first read by the NRC staff, after being made available in its entirety in August 1981, the staff was concerned over the implications contained in the findings. They concluded that the report was deserving of a systematic, detailed evaluation. From mid-September to early October 1982, the NRC conducted this detailed, systematic review and released its findings as NUREG-0948 of December 1982.

The February 26, 1985, memorandum and order raised questions over this review process. NRC Region IV recognizes that a significant breakdown in any portion of the QA program for design would be reportable to the extent that a deficiency was found as described in 10 CFR 50.55(e). The staff has indicated to us that they did consider whether a significant breakdown in QA had occurred in their evaluation of each Quadrex finding in NUREG-0948 and that the information in the Quadrex Report was not sufficiently detailed to conclude that a significant QA breakdown has occurred.

Q.5 How have you now evaluated whether a significant breakdown in the QA program, or a portion thereof had occurred at the STP?

A.5 In order to ensure that these matters have been properly reviewed within the limits described by the Board, we have assigned a project inspector (Robert G. Taylor) with many years of experience involving nuclear plant

design and construction and 50.55(e) reports to review those Quadrex items specified by the Board. We have reviewed his testimony and agree with same.

Q.6. What guidance had been issued by I&E on the subject of 10 CFR 50.55(e) and how did the HL&P response to the Quadrex Report adhere to this guidance as interpreted by Region IV?

A.6. New guidance entitled "Guidance - 10 CFR 50.55(e), Construction Deficiency Reporting" was formally issued April 1, 1980. This guidance was made available to NRC applicants generally. The guidance was given to HL&P and discussed with them, in draft form, in a meeting in March 1980.

This guidance differed from the previous version, dated July 1, 1976, mainly in the inclusion, for the first time, of a new category of items, - the potentially reportable deficiency. Since the intent of 10 CFR 50.55(e) is to provide the NRC with a basis for evaluating safety consequences of significant deficiencies and for determining the need for further action by NRC, it is clear that the NRC would like this information as soon as possible. Since the determination as to whether an item is significant might be time consuming, this guidance set up a new category of item and suggested reasonable time limits for the evaluation process. In doing so it was recognized that some items called potentially reportable would eventually be evaluated as not meeting the criteria of 10 CFR 50.55(e) and, hence, a report would not be issued. Given such an ultimate evaluation, the initial prompt notification (within 24 hours)

would not have been necessary in the first place. Significant problems are surfaced in a timely manner by this mechanism at the expense of having to deal with problems that will subsequently be determined to not be significant.

What is then created in practice is a screening mechanism for nonconforming items. At the first step, people at the working level in QC, engineering, or construction who identify nonconforming items note these items on a nonconformance report (NCR) or other similar document. Over the course of plant construction thousands of these reports may be written. These reports are screened using broad interpretations of the 10 CFR 50.55(e) criteria and those of possible significance are passed to an evaluation group. The remainder are being dispositioned in accordance with the applicant's or contractor's procedures. The broad interpretation of the reporting criteria is intended to ensure that all eventually reportable items pass to the next level. An evaluation of the NCRs that meet the test of possible significance is then undertaken. Some of these are determined to be not reportable and returned to be processed as NCRs. Some are determined to be reportable deficiencies and should be promptly passed to the applicant's organization that is responsible for making notification to the NRC. Those possibly significant items that are not found to be either definitely reportable or definitely not reportable by the end of the prescribed evaluation period (the April 1, 1980, guidance suggesting 14 days) are designated as potentially reportable and passed to the applicant who then must notify the NRC within 24 hours. In my experience, I have found that, on average, one-third to nearly two-thirds

of these items are subsequently evaluated as nonreportable, having failed to meet the criteria of 10 CFR 50.55(e) in the continuing evaluation.

In our inspection of construction, Region IV personnel review the screening mechanism to determine that significant items are appropriately reported. Each reportable item is inspected to determine that adequate corrective action has been taken. A sample of those items designated as potentially reportable and subsequently determined to be not reportable are inspected to determine that we agree with applicant's judgement on significance. NRC Region IV inspectors' views on HL&P's program for reporting significant deficiencies are included in the testimony of D. L. Garrison and H. S. Phillips and represent NRC Region IV views from 1979 to the present. In addition, Mr. Garrison describes HL&P's trending program.

In responding to the Quadrex Report, the applicant conducted a review of the report in the 24 hour period referred to in the guidance and contained in the regulation and made notification on a number of items. The Quadrex Report was a report of the audit findings of Quadrex and, as noted in Mr. Taylor's testimony, did not contain sufficient detail on many items to make a determination of reportability without further evaluation. In our special investigation of the handling of the report (82-02) we did determine that the applicant apparently had sufficient information available to it on two items related to the Quadrex Report that were originally identified in November 1980 and January 1981 that a notification would have been appropriate at that time instead of waiting for the Quadrex Report to be completed. The applicant's response to this

Notice of Violation indicates that the determination that these items were potentially reportable was only possible when the additional information contained in the Quadrex Report was made available from their contractor in May 1981.

In the staff review of the Quadrex Report as noted in NUREG-0948, the "NRC Staff Response to Licensing Board Memorandum and Order Regarding the Reportability of the Quadrex Report" (August 24, 1984), and the recent review by Mr. Taylor, we have found that the applicant adequately applied the IE guidance of April 1, 1980, regarding reportability, excepting the two items identified in 82-02 for which a violation was issued for untimely reporting.

Q.7 What are your views on the reportability of the Quadrex Report as a whole under 50.55(e)?

A.7 It was not reportable. The Quadrex Report did, however, raise important questions with regard to the design process for the South Texas Project. Nevertheless, this does not automatically lead one to the conclusion that it should have been reported. At issue is whether, and to what extent, the report represented deficiencies that were significant in whole or in part and whether this represented a QA breakdown. A deficiency must have the potential to adversely affect the safe operation of the facility. Whether this potential existed or not had to be evaluated by technical experts who reviewed the details of the report. The current staff review has concluded that the findings in the Quadrex Report that were not

reported under 50.55(e) did not demonstrate significance or did not provide sufficient detail to indicate that a deficiency could exist or that a significant QA breakdown had occurred.

This review does not lead to the conclusion that the Quadrex Report was of no importance; rather, the issues raised therein had not progressed to the point where a significant deficiency as defined by 50.55(e) had occurred.

Q.8 Please provide your views on the character of HL&P in view of the fact that they did not report the Quadrex Report as a potential reportable deficiency.

A.8 With the exception of the three issues identified as significant deficiencies in accordance with 10 CFR 50.55(e), HL&P was not required to report the Quadrex Report as a potential deficiency. The fact that the report identified potential problem areas that were further evaluated and which resulted in action by the utility to avoid significant deficiencies is a credit to the utility. This reflects favorably on its character. The utility did discuss the matter with NRR. NRC Region IV would have preferred that the utility have approached Region IV staff with this same information. However, that the utility seemed to perceive design matters to be more within the domain of NRR is an understandable condition. NRC Investigation Report 82-02 (at 4) reflected this perception.

In my view, looking at the report in 1985, HL&P should have discussed the report with NRC Region IV personnel. However, I recall that in 1981 it was not clear to me (as a senior resident inspector) what agency-wide policy was appropriate with respect to studies and reports, not required by regulations, that were initiated by the utilities in order to get a third-party view of construction and management effectiveness. It was conveyed to me, by NRC Region IV managers, in general, that NRC actions, if any, should avoid any "chilling" effect on the conduct of these types of studies since these were viewed as being both useful and necessary. Even though this approach was openly discussed with the inspection staff, it was recognized, if the results of such a review indicated a construction deficiency as described in 50.55(e), such a deficiency should be promptly reported. Therefore, no negative conclusions can be drawn with regard to the character and competence of HL&P with respect to their candor in keeping the NRC informed. To the contrary, HL&P did discuss the matter with the NRR project manager and it did report the significant deficiencies that they were required to report.

Q.9 Does the fact that the entire Quadrex Report was not reported to the NRC under 50.55(e) indicate a lack of candor or truthfulness on the part of HL&P?

A.9 No, the NRC specific review of the Quadrex Report by Mr. Oberg (NUREG-0948), the staff response of August 24, 1984, (cited above) and, now again, Mr. Taylor, in his testimony, has confirmed that only three of the findings, taken individually, meet the criteria for reportability and

we have reviewed the report in its entirety and have concluded the same.

Q.10 Does the fact that it was not reported in its entirety indicate an unwillingness to abide by regulatory requirements?

A.10 No, as discussed above, with the exception of the three items discussed above, the report does not contain deficiencies that are reportable in whole or individually.

Q.11 Does the fact it was not reported in its entirety indicate an abdication of, or failure to accept, the responsibility to protect the public health and safety?

A.11 No, as discussed above, the fact that the Quadrex Corporation was commissioned by HL&P to audit the design process indicates to us a certain willingness on the part of HL&P to assure itself that it was carrying out its responsibility.

A.12 Does the fact that the Quadrex Report was not reported as a whole under 50.55(e) reflect adversely upon the character or competence of HL&P.

A.12 No.

Q.13 Please provide an update to the general conclusions of the SALP report (83-26) and to the Regional Administrator's cover letter dated June 22,

1984, with regard to the character and competence of HL&P and its new contractors.

- A.13 The Regional Administrator's letter of June 22, 1984 stated that "the overall regulatory performance by Houston Power and Lighting Company at the South Texas Project has been satisfactory" for the period December 1, 1982 through November 30, 1983.

The current views of the NRC Region IV staff indicate that the applicant continues to improve in performance since the last SALP period, and the performance is indicative of a high degree of management involvement in all site activities. In support of this view is the testimony of Senior Resident Inspector Claude Johnson, Resident Inspector Dan R. Carpenter, and past Senior Resident Inspector Dan Tomlinson. The NRC staff is currently preparing a SALP Report for the period of December 1, 1983-June 31, 1985. Preliminary discussions with the inspectors involved in this effort support the above general conclusion. The specific assignment of performance categories will be determined by the SALP Board currently scheduled to meet in mid-August.

- Q.14 Would you describe the staff's observations in assessing the reportability of open item 8312-01 (NRC Inspection Report 83-12 at 10 paragraph 7).

- A.14 This open item was identified by NRC Inspector Chet Oberg (retired October 3, 1984). A follow-up inspection was conducted on May 28-31, 1985, and will be documented in NRC Inspection Report 85-07. The initial

observation by the NRC inspector documented in Inspection Report 83-12 was based solely on a review of HL&P audit reports D06-201 and C10-301. The applicant representative, at that time, indicated that additional information was available but the NRC inspector was unable to review those documents at that time. A subsequent review of those documents by the NRC staff has been conducted which indicates there was no breakdown in the Bechtel QA program. Bechtel's responses to the HL&P audit findings of November 2, 1982, indicate differing opinions on how to impose ANSI daughter standards and quality program requirements to lower tier contractors. These responses show that Bechtel was imposing adequate specific requirements but not in a methodology acceptable to HL&P. These differences were dispositioned on March 3, 1983, and were acceptable to the NRC inspector.

The HL&P audit conducted April 1983 was originally scheduled for accomplishment July 1982 but because Bechtel's newly developed, project specific procedures had not been approved and implemented, the audit was delayed on two subsequent occasions. A review of Bechtel's and HL&P's correspondence relating to this subject was reviewed for the period of July 1982 through December 1983. This review showed that necessary corrective actions were taken prior to actual procurement under the specifications.

Professional Qualifications

of

Eric H. Johnson

United States Nuclear Regulatory Commission

I am Chief, Reactor Project Branch 1, Region IV, Nuclear Regulatory Commission, Arlington, Texas. I have held this position in Region IV since October 1983. In this assignment, my responsibilities include reviewing, approving and performing routine and special inspections at nuclear facilities assigned to Region IV. In this position, I was responsible for managing the inspection program at the South Texas Project through the Chief, Reactor Project Section.

I received a Bachelor of Science Degree, with honors, in marine engineering from the United States Naval Academy in 1967.

Prior Work History

1983-1985 Chief, Reactor Project Branch 1, Region IV

Responsible for managing the inspection program and assigned inspectors at both operating plants and plants under construction. This included recommendations and enforcement actions for deficiencies, and approval on NRC inspection reports for routine and special inspections. Participated in the Systematic Assessment of Licensee Performance as a member of the

SALP board. For 3 months during 1983, served as the Technical Assistant to the Director, Division of Reactor Safety and Projects. (NRC)

1982-1983 Enforcement Officer, Region IV

Responsible for managing the enforcement program for the regional office, including review and analysis of inspection findings and recommendations for enforcement actions. Until a reorganization of functions in July 1982, supervised the activities of two investigators in the investigation of alleged wrongdoing at plants in the geographic area covered by RIV (NRC).

1981-1982 Reactor Inspector

Served as a member of the technical staff of Region IV with responsibility for the inspection of assigned power, research and test reactors during test, startup and operation. (NRC)

1979-1981 Administrator, Nuclear Safety Division

Responsible for organizing and coordinating the Secretariat's work in the areas of emergency core cooling research, containment safety, consequence modelling and the International Standard Problems performed in these areas. Acted as Secretary to the International Working Groups in these above areas. (Nuclear Energy Agency, OECD, Paris, France)

1975-1981 Reactor Inspector

Served as a member of the technical staff of Region IV with responsibility for the inspection of assigned power, research and test reactors during test, startup and operation. (NRC)

1967-1975 Reactor Operations

Various supervisory responsibilities for naval nuclear propulsion plant operation. Duties includes operation, training of operators, health physics, maintenance, planning and scheduling, and design changes. (U.S. Navy)

Professional Qualifications

of

George L. (Les) Constable

United States Nuclear Regulatory Commission

I am Chief, Reactor Projects Section B, Region IV, Nuclear Regulatory Commission, Arlington, Texas. I have held this position since June 9, 1985.

Education: Navy Nuclear Reactor Operator Program (1964)
BSE (Nuclear Engineering), University of Florida (1975)

Experience:

1985 to Present Chief, Reactor Projects Section, RIV NRC

Responsible for direction of NRC inspection personnel for South Texas Project and Waterford 3.

1980 to 1985 Senior Resident Inspector, RIV NRC

Assigned to Waterford 3 Nuclear Station (CE-PWR). Responsible for routine and reactive inspection during construction and testing.

1984 to 1985 NRC Waterford Task Force Site Team Leader, RIV NRC

Assisted in the overall coordination of NRC Task Force activities associated with Waterford 3 (NTOL). Activities included coordinating the efforts of up to 50 inspectors and consultants during the resolution of numerous allegations.

1978 to 1980 Reactor Inspector, RIV NRC

Principal inspector for Cooper Nuclear Station (BWR - operating). Responsibility included conducting the routine and reactive inspection program for an operating reactor.

1975 to 1978 Reactor Inspection Specialist, Division of Reactor
Operations Inspections, U. S. NRC

Participated in development of reactor inspection program, headquarters enforcement cases, principal correspondence, interpretation of TS and Standards. Provided interface between regions and other NRC offices. Aided in the development of standards and regulations.

1971 to 1975 Assistant Reactor Supervisor (SRO), University of Florida

Training Reactor

While a full time student, worked up to supervising entire day-to-day operation of facility, including direct supervision of two full time and four part-time ROs and SROs. Responsibilities included teaching portions of reactor operations courses and training utility operators.

1968 to 1971 Reactor Operator/Instructor, S1C Prototype, U.S. Navy

Trained and qualified Navy Reactor Operators in the area of reactor operations and maintenance.

1965 to 1968 Reactor Operator/Electronics Technician, U.S.S.
Shark SSN-591

Qualified reactor operator, radiation control technician, member of nuclear weapons incident response team. Tour of duty included approximately two years of routine submarine operation and a nine month refueling

1964 to 1965 U.S. Navy - A1W Prototype

While in training, served as radiation control technician. Qualified as reactor operator on both A1W reactors.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

| | | |
|-------------------------------------|---|--------------------|
| In the Matter of | } | |
| HOUSTON LIGHTING AND POWER COMPANY, | } | Docket Nos. 50-498 |
| <u>ET AL.</u> | } | 50-499 |
| (South Texas Project, Units 1 & 2) | } | |

Testimony of Robert G. Taylor

Q.1 Would you please state your name, business address, employer and position?

A.1 I am Robert G. Taylor, Project Inspector, Region IV, Nuclear Regulatory Commission. My business address is 611 Ryan Plaza Drive, Suite 1000, Arlington, Texas.

Q.2 What are your current duties and responsibilities in this position?

A.2 I coordinate safety-related inspection efforts relative to reactors assigned to me. My duties include coordination of Region IV construction inspection activities of Near Term Operating License Facilities.

Q 3 Mr. Taylor, have your professional qualifications been admitted into evidence in this proceeding previously?

A.3 Yes. My professional qualifications appear following Tr. 9126, ff.p.64.

Q.4 Are there any changes in those qualifications that should be made?

A.4 Yes. In 1984 I left the position of senior resident reactor inspector-construction, Comanche Peak, and became the project inspector for the Wolf Creek and River Bend Stations. I continue in that position to the present day.

Q.5 Mr. Taylor, are you familiar with the "Design Review of Brown & Root Engineering Work for the South Texas Project," prepared for Houston Lighting and Power Company by the Quadrex Corporation and dated May 1981?

A.5 Yes. That document is referred to as the Quadrex Report.

Q.6 What is the purpose of your testimony?

A.6 The purpose of my testimony is to evaluate and assess findings identified by the Board which are in the Quadrex Report, with regard to whether any of these findings were reportable to the NRC under the requirement of 10 CFR 50.55(e).

Q.7 Are you familiar with the Licensing Board's interpretation of 10 CFR 50.55(e) contained in its Memorandum and Order of February 26, 1985?

A.7 Yes. I have based my testimony herein on that interpretation.

Q.8 Have you examined and evaluated generic finding 3.1(a) of the Quadrex Report?

A.8 Yes. In my view, the overall finding consists of four sub-items of concern with the B&R design process. They state that interfaces between the various engineering disciplines are not effective, and that there is no overall plant criteria for separation of systems and components. They also indicate that there is no interdisciplinary interpretation for the treatment of the single failure criterion and that the fire hazard analysis has not been converted into a control document for general design usage.

Q.9 Did you also review the documents referenced with the concern or finding to aid you in understanding the basis for their finding?

A.9 In each instance where such a reference has been provided, it has been reviewed. References within these references, such as to drawings were not reviewed.

Q.10 Have you evaluated this finding and/or its subsets for potential violation of any of the criteria of Appendix B to 10 CFR 50?

A.10 Yes. I also used American National Standard Institute (ANSI) document N45.2.11 titled, "Quality Assurance Requirements for the Design of Nuclear Power Plants," as an aid. I have attached a copy to this testimony.

Q.11 What is the status of this document within the NRC?

A.11 The NRC staff has endorsed the standard with clarification via Regulatory Guide 1.64, Revision 2, June 1976.

Q.12 Did you find that the generic finding of any of its sub-items violate any of the requirements of Appendix B?

A.12 I have found no requirement in either Appendix B or N45.2.11 that would make an integrated systems level review a necessity. I would note that the sub-item in regard to interdisciplinary interfaces was not supported by any reference. The same comment applies to the sub-item on interdisciplinary criteria for use of the single failure criterion. The other two sub-items appear to flow from the only reference, question H-6. The Quadrex assessment of this question does not direct itself to whether the data provided by B&R was, or was not, found adequate; rather it states that there was no STP criteria for physical separation, with the reviewers making independent decisions on adequacy. It further states that a subcontractor document was not converted into a control document but failed to indicate whether the B&R design was, or was not, adequate in regard to fire hazards. The lack of factual

support for the assertions has made it difficult to determine if a violation exists.

Q.13 Was the overall generic finding, or any subpart of it, required to have been reported under 10 CFR 50.55(e)?

A.13 In my judgment, such a report either as a potential reportable item or as a reportable item would have been inappropriate given the complete lack of factual data upon which to make an assessment.

..14 Is the fact that this Quadrex finding was not reported under 50.55(e), in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.14 No.

Q.15 Does the fact that it was not reported reflect an unwillingness to abide by regulatory requirements on the part of the applicant?

A.15 No.

Q.16 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.16 No.

Q.17 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.17 No.

Q.18 Mr. Taylor, have you reviewed and evaluated generic finding 3.1(b)?

A.18 Yes, I have also reviewed the total of 23 direct and indirect references that apply to this finding.

Q.19 Does that generic finding represent a violation of one or more of the criteria of Appendix B?

A.19 The three individual items of the overall finding must be considered separately since there is no obvious synergistic relationship between the three items that would have safety impact. Taking the first item, the Quadrex position seems to imply that an engineering group receiving data from another group should check the reasonableness of the data. At face value, this would appear to be a reasonable position, but in actuality, there will be many instances where this is not possible because the receiving group has neither the information nor the capability to test the data for reasonableness and must place reliance on the expertise of the group from which they received the data. It could be argued that Criterion X "Inspection" might be applicable. If this were the case, it would always require that the work of one group be inspected by another group. Criterion III, however, allows an

individual in the same work group as the originator to do the inspection which is referred to as check or verifying. Regulatory Guide 1.64 has placed a restriction on this practice in that the verifier shall not be a party who had input into the design, nor shall the reviewer be the originator's supervisor except under defined circumstances. These apparent concessions to the general idea of independence recognize the fact that the necessary expertise to perform a meaningful review may be in only one group.

The second part of the first item also indicates that each group providing data to another group has a responsibility to monitor how the receiving group uses that data. I have found nothing in either Appendix B or the subordinate documents that would imply this is a requirement. Criterion XVIII does require that a planned and scheduled series of audits be carried out by personnel competent to verify that the QA program for design is being effectively implemented. Such an audit should test a design group's use of data received from other design groups but it is doubtful that each group would be so tested with a frequency that would satisfy the Quadrex expectation of "consistency." I have no knowledge of whether such audits were effectively implemented nor have I found any such information referred to in the parts of the Quadrex report that I have reviewed. On this basis, I have found that there is insufficient factual information to conclude that a violation exists.

Q.20 Could you now move on to the next item in this generic finding?

A.20 The Quadrex statement indicates that their review has shown design verified calculations with errors occurring at a rate higher than should be encountered. A similar statement appears in the Quadrex assessment of question C-16. Neither of the statements contain any quantification of what was found nor do they provide a baseline for an acceptable error rate. N45.2.11 recognizes that some errors will reside in designs throughout the entire life of the design work and may not surface until the plant is in actual operation. When errors are detected, they would be evaluated for significance and corrective action taken appropriate to the circumstance. The fact that the Quadrex finding states that there is an excessive error rate does not constitute a violation.

Q.21 What are your conclusions as to the final item?

A.21 The final concern in this finding can only be well understood by considering the the remarks which continue on the same page. First of all, it indicates a dissatisfaction with the fact that B&R did not perform a design review of the work performed by Westinghouse and EDS, Inc. as a matter of policy. Although I have no specific knowledge of the contract arrangements involved, if Westinghouse were a contractor to the licensee, B&R would have no responsibility to review the design work of Westinghouse unless specifically directed to do so by the licensee. There is no evidence of such a request from Quadrex. Most A/Es that I have experience with, do not have the engineering expertise to effectively review the designs of a Nuclear Steam Supply System vendor. Further, N45.2.11 effectively holds each group responsible for the

quality of its own work. That would certainly include Westinghouse in these circumstances. The same basic logic must be applied to vendors doing design work for the A/E. The rationale for this is quite clear in that the A/E usually does not have the in-house expertise to create each and every design. As an example, the suppliers of pressure vessels generally are required to do the design work at a detail level that will create a vessel that will perform the design mission dictated by the A/E and fulfill the requirements of the applicable Code involved, usually ASME Section III. To do this, the vendor acquires the necessary engineering expertise to do the design detail work, whereas the A/E may well not have the specialized talent to do an effective review. Again, N45.2.11 recognizes that fact and requires that each engineering organization be fully responsible for its own work. ASME Section III also recognizes this situation in that it requires the designer to certify that his design meets the Code and further that he must be a registered professional engineer.

Q.22 Again, in your opinion, do any of the three findings in 3(b) represent a violation of Appendix B?

A.22 No. Appendix B does not require the engineer to review the design work of other design organizations.

Q.23 In your opinion, should any of the findings have been reported to the NRC.

A.23 Taken generically and as defined by Quadrex, findings one and three are not deficiencies and could not be construed as reportable or potentially reportable. Finding two might have been considered potentially reportable if Quadrex had provided a preliminary assessment of the significance of the errors. The report did not provide sufficient information to conclude whether the item was reportable and subsequent evaluation demonstrated this item to be not reportable.

Q.24 Is the fact that this Quadrex finding was not reported, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.24 No.

Q.56 Does it reflect an unwillingness to abide by regulatory requirements on the part of the applicant?

A.25 No.

Q.26 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.26 No.

Q.27 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.27 No.

Q.28 Have you reviewed and evaluated generic finding 3.1(c)?

A.28 Yes, but let me clarify this item. Although there is an interrelationship among the six paragraphs of the finding, in many ways it is better to consider that each of the paragraphs, except for the fourth one, are discussing somewhat different things. The first paragraph states that no written design bases are provided to designers as to what combination of events and plant modes are to be considered. Consideration of degraded equipment performance was stated as having been ignored. This very strong statement, however, appears to have been moderated by the second paragraph which indicates that the design bases, taken to be the same as criteria, have not been revised from the 1973-1975 time frame to reflect more recent industry experience. The NRC staff has not, in general, required a continual upgrading of the design bases of the power facilities after the construction permit has been issued to reflect various events within the industry except when a substantial improvement in public health and safety can be achieved. This statement can be confirmed by reference to 10 CFR 50.55a which stipulates which codes and standards are acceptable for use in designing and constructing the reactor coolant pressure boundary. In effect, codes and standards in effect when the facility was given a CP may continue to be used as the standard throughout the entire process. In paragraph 3, it is indicated that in one design area (HVAC), the only design bases considered was "normal plant operations" which, even in the

1973-1975 time period, probably would not have been acceptable since heat loads and/or air flow paths might not be the same for all conditions. The other element of this paragraph deals with what appears to be a calculational error that led B&R to believe the essential cooling water pond was correctly sized when it may not have been.

Q.29 Do you view either the problem in the HVAC or with essential cooling water pond (ECP) to be indicative of a significant breakdown in the design QA program?

A.29 In the absence of other information, it appears that both situations were a matter of engineering judgmental error. I would expect that in the case of the HVAC situation, that the error would have eventually been identified by a design reviewer and corrected. Had an NRC inspector found a large calculational error as with the ECP situation he might have issued a violation based upon either Criterion V or VI of Appendix B. Based on the information provided in Question N-17 at the time of the Quadrex Report, the more likely course would have been to issue an "unresolved item" which would cause the licensee to provide more information; i.e., evaluation but no violation would have been assessed.

Q.30 Should either the HVAC or the ECP items have been reported to the NRC?

A.30 The HVAC problem was in fact reported to the NRC in a telephone call to Region IV on May 8, 1981. Based upon my understanding of Question N-17,

I believe it should have been reported as a potential item pending further evaluation. With regard to the ECP finding, please see my testimony below (pp. 44-45 infra).

Q.31 Should this particular generic finding have been reported?

A.31 No. To have been reportable as a generic matter, the two incidents would have to be construed as being indicative of a significant breakdown in the design QA program. As I have indicated previously, I view the incidents as individual errors in engineering judgment not stemming from the same root cause, if indeed these were errors at all. These are, in my opinion, not indicative of a significant QA program breakdown, as defined in the IE guidance.

Q.32 Please move on to the final two paragraphs of the finding.

A.32 Paragraph five indicates that a portion of the HVAC system was designed as a nonsafety system and appears to be related to the previous HVAC issue although the connection is not firm. The issue of safety-related versus nonsafety-related is essentially the subject of generic finding 3.1(d). I will talk about the generic issue in that context.

Q.33 The last paragraph in 3.1(c) indicates that postulated line cracks and breaks in piping are inadequate. What is your view of this item?

A.33 This item appears to follow from the fact that B&R used design bases from the 1973-1975 time period, however, Quadrex personnel were applying standards extant in 1981. The imposition of these newer standards would be a backfit of NRC requirements if applied by the staff and would require justification for their imposition. The failure to voluntarily upgrade does not constitute a violation.

Q.34 Do either of these items violate Appendix B?

A.34 Based upon the information available, I find in one case an error in engineering judgment (HVAC) and in the other case, a deliberate, but not necessarily incorrect, perception. As such I don't see a violation of Appendix B as having been shown.

Q.35 Do you believe that all or any part of these two sub-items to have been reportable?

A.35 As I stated previously, the applicant did report the HVAC problem to the NRC in accordance with 50.55(e) on May 8, 1981. In the case of pipe crack and break problem, the apparent deficiency relates to the application by Quadrex of a later standard and, therefore, it would not have been reportable.

Q.36 Would you now address the reportability overall of the generic finding?

A.36 If indeed there is a generic overall finding here it can only be that there is no written design base or at least that the design base is in error. The Quadrex Report does not provide sufficient information for a conclusion. There is no basis for saying that a generic problem exists. As such, it would not be reportable even as a potential deficiency as called for in the April 1980 guidance on 50.55(e).

Q.37 Is the fact that this generic Quadrex finding was not reported, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.37 No. As noted above, the ECP issue was subsequently resolved as being not reportable and, as I have indicated, the HVAC situation was in fact reported.

Q.38 Does it reflect an unwillingness to abide by regulatory requirements?

A.38 No. There was no regulatory requirement being violated.

Q.39 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.39 No.

Q.40 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.40 No.

Q.41 Have you reviewed and evaluated generic finding 3.1(d)?

A.41 I have. The issue here is that in the Quadrex view, B&R has established very sharp distinctions between safety and nonsafety activities and that, as a result, various engineering activities are done differently in each class. Coupled with this concern is an attitude of B&R personnel, perceived by Quadrex, that they have only to do what the NRC requires.

Q.42 What is your view of this finding?

A.42 The NRC staff does not require the application of the quality assurance criteria of Appendix B to areas other than those that have a direct impact on safety, as in prevention or mitigation of a design basis reactor accident, or are required to be designed and built to protect and support the safety-related functions.

Q.43 Who determines what falls under Appendix B?

A.43 The licensee and his various agents, in accordance with Criterion II of Appendix B, develop a list of structures, systems, and components that fit into one or more of the combinations that I previously described. Frequently, there will be components or subsystems connected to a safety system that have no safety function and are listed as well to show the

distinction. These lists are included in the SAR, as recommended by Regulatory Guide 1.70. In addition, the piping and instrument diagrams generally contain flags that clearly show the safety classifications. These diagrams are also included in the various SAR chapters to which they pertain.

Q.44 What is the NRC role?

A.44 The NRC tacitly concurs with these described lists and drawings when it issues the construction permit and/or the operating license. These lists and drawings are generally only changed when a significant error is found and then by amendment to the SAR.

Q.45 What about the seven sub-items or examples listed in the generic finding?

A.45 Items 1, 3, and 7 have been previously discussed as part of other generic findings. Item (2) again relates to a calculational error; changed and somewhat more conservative criteria evolving from newer experience, and finally a concern that B&R did not use new criteria that they believed the NRC was going to promulgate in the near future. Item (4) pertains to engineering tools, computer codes, not having been subject to a formal verification program prior to use on safety design work. I could not determine that Item (5) and (6) were related to the generic finding. For item (6) I had the same problem as with item (5).

Q.46 Do you consider that the generic finding or any of subfindings are violations of Appendix B?

A.46 The subitem dealing with the use of unverified computer programs would be a violation of Criterion VI. Even though such computer programs generally are not documents in the traditional form, they serve the same purpose and I feel they fit within the scope of the criterion.

Q.47 Do you believe that either the generic item or any of the sub-items should have been reported to the NRC?

A.47 The item on computer codes was reported to the NRC via a telephone call of May 8, 1981. The balance of items neither individually nor collectively, constitute reportable items.

Q.48 Is the fact that this Quadrex finding was not reported, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.48 No.

Q.49 Does it reflect an unwillingness to abide by regulatory requirements?

A.49 No.

Q.50 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.50 No.

Q.51 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.51 No.

Q.52 Have you reviewed and evaluated generic finding 3.1(e)?

A.52 I have. It indicates that there are no written guidelines for the conduct of Failure Mode and Effects Analysis. I also gather that the writer's position was that there should be relatively free standing documents with a title "Failure Mode and Effects Analysis" and that B&R was unable to provide him with same or even a listing of such documents.

Q.53 Is there a requirement for performance of Failure Modes and Effects Analysis?

A.53 The title "Failure Modes and Effects Analysis" in 10 CFR 50.34(f)(2)(xxii) but that reference does not apply to this type of facility. Let me note, however, failure analysis at a structural, system and component level is a requirement of Part 50 for inclusion within the FSAR, however, the term Failure Mode and Effects Analysis is

not used except as noted. Another NRC inspector, at my request, examined the NRC's Standard Review Plan relative to use of the term and stated to me that he did not find it.

Q.54 What is the purpose of such failure analysis?

A.54 The essential purpose is to demonstrate that the single failure criterion, as defined in Appendix A to Part 50, has been met; i.e., the failure of no single active component in a system should cause the total failure of the system to perform its safety function. Typically, redundancy is a way to satisfy the single failure criterion if done properly. There is an example referenced in the generic finding where the criterion was apparently not satisfied since an air supply system furnishing control air to valves of an otherwise redundant system and should the line have broken or become plugged, both systems would have failed to operate properly.

Q.55 Is either the failure to have written guidelines for Failure Mode and Effects Analysis or for the failure to generate free standing analysis, as you believe the Quadrex person thought was the case, required by Appendix B?

A.55 It might be argued that Criterion V of Appendix B would be applicable and that a "procedure" for failure analysis is a requirement. It could similarly be argued this could be accomplished by drawings or instructions. I would say, however, that such analysis is a fundamental

part of the practice design development and that such a procedure is not necessary. An engineer would gain the knowledge as a part of his education and experience. N45.2.11 requires that failure effects and the postulated condition to create failure must be part of the design input data for the design of structure, system or component. The designer and the design verifier have to consider the design inputs in their work. The personnel subsequently preparing the SAR must perform sufficient analysis to describe a given system or structure such that they can demonstrate to the NRC that the requirements of Part 50 and of Appendix A to Part 50 have been satisfied. Further, the failure to have the free standing failure modes and effects analysis is not a requirement that I have been able to determine exists. No, I don't believe that a violation exists in either aspect.

Q.56 Should this generic finding have been reported to the NRC under 50.55(e)?

A.56 For the reasons I have testified to above, it is my opinion that the item was not reportable.

Q.57 Is the fact that this Quadrex finding was not reported, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.57 No.

Q.58 Does it reflect an unwillingness to abide by regulatory requirements?

A.58 No.

Q.59 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.59 No.

Q.60 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.60 No.

Q.61 Have you reviewed and evaluated generic finding 3.1(f)?

A.61 Yes. This item consists of observations that there appears to be no systematic mechanism to assure that the designs meet FSAR commitments nor conversely any mechanism to cause updating of the FSAR to represent the design.

Q.62 What is your evaluation of this finding?

A.62 First let me say that I have found that Quadrex has stated a number of times through these generic findings that the FSAR cannot be used as a design document. I have found no basis for such a statement, since

there is no defined NRC position on this matter. Further, the FSAR must become a design control document at some point in the design effort since it frequently will become the only record of the results of the ongoing design review by the NRC staff and the licensee. At yet a later time, the NRC Safety Evaluation Report becomes a design input document since it represents the final staff review and frequently requires the licensee to make changes in the facility design.

Q.63 Is the licensee required to maintain the FSAR current at all times?

A.63 No. However, the applicant is expected to periodically update the FSAR by amendment. In recent years, the submittal of the FSAR often precedes the issuance of the operating license by a considerable period of years. To have the FSAR always up to date would require perhaps thousands of amendments to the FSAR during this period which is not very practical. More typically, a licensee will accumulate changes for a period such as 3 or 4 months and then file the entire package as an amendment. I have experienced FSARs with as few as 15 amendments to as high as 50. The licensee is required to affirm in writing that the facility and the FSAR match, prior to OL issuance. One year after receiving the operating license the licensee is required to provide an updated FSAR and to update that document yearly.

Q.64 Was the licensee's failure to maintain the FSAR up to date a violation of Appendix B?

A.64 In general no, but there may be exceptions. Since there are no cited examples in the Quadrex generic finding to support the finding, I cannot determine that a violation exists. If it were determined by the NRC that the licensee's FSAR were deviated from the "as built," it would be evaluated to determine whether this failure resulted from oversight or inattention (possible violation) or merely the processing time between amendments (probably not a violation). The second part of the generic finding, dealing with the lack of centralized interpretation of Codes and Standards, does not relate to the above issue.

Q.65 Do you find that the lack of a centralized interpretation group to have been a violation of Appendix B?

A.65 In my understanding of the regulations, there is no requirement for centralized interpretation, therefore, there can be no violation. Incorrect interpretation regardless of who made them could be a violation, but only on a case basis. In the case of the one cited example, I can make no decision on whether there were or were not violations without considerably more information than is made available within the example Quadrex offers.

Q.66 Should either of the two generic findings or the cited example have been reported to the NRC?

A.66 Since there is no requirement applicable to the generic aspects of the finding, the licensee could not have been expected to report either of these.

Q.67 Is the failure to report this Quadrex finding, in your view, an indication of a lack of candor or truthfulness on the part of HL&P?

A.67 No.

Q.68 Does it reflect an unwillingness to abide by regulatory requirements?

A.68 No.

Q.69 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.69 No.

Q.70 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.70 No.

Q.71 Have you reviewed and evaluated generic finding 3.1(g)?

A.71 Yes, but let me say that it is difficult accepting that there is one overall generic finding in this item. I have attempted to list what I see as more-or-less separate issues within the stated overall issue. They are:

1. Much of the plant design basis is rooted in engineering judgment with difficulty on retrieving the rationale to support the judgments.
2. No overall document controlling the interface information requirements.
3. Key front end documents apparently not developed and issued early enough.
4. Significant quality variations in the design review comments.
5. Uncertainty by B&R of the depth of review performed by W.
6. EDS not reviewing all B&R design changes.
7. W design basis carried over to BOP without confirmation of applicability.
8. Design basis of other ~~AW~~Rs used without confirmation of applicability.

9. No consistent requirement for the design basis margins to be used by each discipline.

10. B&P does not require use of design manuals or engineering log books.

Q.72 Have you drawn a conclusion relative to each of these items?

A.72 There is not enough information in the generic finding to indicate what Quadrex was concerned with on the first item although there may be a connection to item 10. Item 2 is very similar to a concern voiced in generic finding 3.1(a) with neither comment being supported by factual information that would allow for analysis. Item 3 is apparently rooted in the Quadrex philosophy that the SAR cannot be used as a design input document. My conclusion relative to that position was given in generic finding 3.1(f). (See pp. 21-24, supra) Relative to items 4 through 8, I cannot offer a conclusion since there is no support for the statements. Item 9 is supported by one example dealing with HVAC design but this is at least in part contradicted by another example in the civil engineering area. The statement is much stronger than the cited facts seem to warrant. Item 10 is also difficult to assess since it states that B&P does not require the use of such manuals and log books, however, it does not state whether these exist and/or they are used.

Q.73 Would either the overall generic finding or any of the sub-items you have listed be violations of Appendix B?

A.73 Since there is so little specificity to either the overall item or to most of the sub-items, I would be very hard pressed to consider them violations of any criterion of Appendix B, even with help of N45.2.11.

Q.74 Should either the overall item or its sub-items have been reported to the NRC under 10 CFR 50.55(e)?

A.74 The sub-items are not well defined and there is insufficient information on these items in the Quadrex Report to consider them as other than observations by the auditor.

Q.75 Is the fact that this Quadrex finding was not reported, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.75 No.

Q.76 Does it reflect an unwillingness to abide by regulatory requirements?

A.76 No.

Q.77 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.77 No.

Q.78 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.78 No.

Q.79 Have you reviewed and evaluated generic finding 3.1(h)?

A.79 Yes I have. In summary, this finding involves a concern that B&R has apparently not developed and specified reliability requirements for electrical and mechanical safety-related equipment. Let me say that the two examples given only partially support the contention. Question E-7 indicates that some parts of the question were satisfactorily answered while other parts were largely not answered, apparently because the design was not complete. Question E-8 does deal with the concept of reliability but at least in part via criticism of the lack of formalized failure modes and effects analysis. The last statement pertaining to the question does come directly to the point that B&R has not specified acceptance criteria for equipment reliability.

Q.80 Does B&R's failure to specify reliability acceptance requirements for equipment violate Appendix B or any other NPC requirements?

A.80 Criterion 21 of Appendix A to 10 CFR 50 requires that the reactor protection and reactivity control systems be of the highest functional reliability and shall have in-service testability. Redundancy and independence . . . shall be sufficient to assure that (1) no single

failure results in loss of the protective function and (2) removal from service of any component or channel does not result in loss of the minimum required redundancy unless the acceptable reliability of operation of the protective system can be otherwise demonstrated. The NRC has not to my knowledge, except for diesel generators, attempted to define or quantify reliability. In lieu of quantification and demonstration of reliability, the NRC utilizes the dual concepts of relative freedom from the probability of single failure plus redundancy to provide reliability. In short, I have found no requirement in the NRC regulations to cause B&R to establish a reliability acceptance standard other than that already stated.

Q.81 Should the licensee have reported this generic finding to the NRC?

A.81 Since I can find no requirement, it would appear that there was no actual deficiency involved and therefore, I would not expect such a report to have been issued.

Q.82 Is the failure to report this Quadrex finding, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.82 No.

Q.83 Does it reflect an unwillingness to abide by regulatory requirements?

A.83 No.

Q.84 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.84 No.

Q.85 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.85 No.

Q.86 Have you reviewed and evaluated generic finding 3.1(i): This item is considered that titled "Nuclear-Related Analysis" and identified in Quadrex report by one of two (j)s.

A.86 I have.

Q.87 What is your assessment of this item?

A.87 The exact thrust of this item is difficult to grasp. On one hand, if one reads the references at the bottom of page 3-12, you will find that they will take you to all of the other generic findings, which I don't believe was the point since the other findings would not have been necessary. I believe that this finding was intended to point out that B&R lacked expertise in those engineering areas that are more uniquely

nuclear as opposed to those areas that are relatively common to any type of design engineering work carried out for the purposes of building a facility of any sort. When viewed in this light, the finding seems to be a caution to the licensee that he could experience delays in his design and licensing areas that he might not be aware of. I think that the statements that much less than adequate choices of analytical methods and assumptions have been made and the error rate in calculations was unexpectedly high, would lead to this conclusion of Quadrex intent.

Q.88 Does the situation that you believe Quadrex was discussing constitute a violation of Appendix B?

A.88 Appendix B is primarily a prescription for establishment of well disciplined management controls from the time period of conceptual engineering to full operation of the plant. Such controls recognize human, procedure, process and material fallibility by requiring controls, checks, inspections and testing. The purpose of the SARs is to allow the NRC to assess the design adequacy of the facility. I believe that it would be very difficult for an NRC inspector to use the data provided as the basis for issuance of a notice of violation of Appendix B.

Q.89 Should this finding have been reported to the NRC?

A.89 Without the references, this concern lacks the technical specificity to be reportable. If the references were connected, it's more in terms of a feel that things were not going well, in the opinion of the contractor for this study, rather than specifically leading to a conclusion that the operability of the plant might be seriously affected. In my view, this falls into the area of an observation by the auditor and does not suggest a reportable deficiency.

Q.90 Is the fact that this Quadrex finding was not reported, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.90 No.

Q.91 Does it reflect an unwillingness to abide by regulatory requirements?

A.91 No.

Q.92 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.92 No.

Q.93 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.93 No.

Q.94 Have you reviewed and evaluated generic finding 3.1(j)?

A.94 Yes. This finding indicates that certain design verification actions will take place very late in the construction cycle and that there are no qualification requirements established for design verifiers and further that the errors in calculations occur too frequently.

Q.95 Would you consider that the finding in any way represent a violation of Appendix B?

A.95 Neither Appendix B nor N45.2.11 establish a requirement that would require the licensee or his engineer to establish minimum qualifications for personnel performing either direct design work or for performing design verifications. These documents only suggest that these people be competent to perform this work. In the same context, Appendix B and N45.2.11 contain only a requirement that each design be verified but neither establish a time in the overall design and construction sequence that the verification must be done. It would seem prudent to have the verification accomplished prior to releasing the design for use but many factors bear on this such that the risk of using an unverified design might well be less than the benefits. The excessive errors in calculations has been previously reviewed in connection with generic finding 3.1(b).

Q.96 Should this generic finding have been reported to the NRC under 10 CFR 50.55(e)?

A.96 Since no deficiency appears to exist, a report to the NRC would have been inappropriate.

Q.97 Is the fact that this Quadrex finding was not reported, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.97 No.

Q.98 Does it reflect an unwillingness to abide by regulatory requirements?

A.98 No.

Q.99 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.99 No.

Q.100 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.100 No.

Q.101 Have you reviewed and evaluated finding 4.1.2.1(b)?

A.101 Yes. Quadrex apparently was dissatisfied by a finding that the B&R civil/structural engineering group was not ascertaining the reasonableness of postulated missiles generated from within a component, in this case a pump. Although it does not so state, it is apparent that the postulated missiles from within the pump were postulated by another engineering group. I would not expect that a civil engineer would have the expertise to challenge the reasonableness of the missiles that were postulated, perhaps by the designer of the pump. The Quadrex assessment to question C-9 indicates that civil/structural was handling the missiles that had been postulated in accordance with industry practice and the state-of-the-art. The remainder of the concern was that there was no evidence that the requirements of a document pertaining to determining and protecting against missiles had been implemented in design.

Q.102 Would you consider this finding to be a violation of Appendix B?

A.102 I could not find that a lack of evidence in this area would be in violation of Appendix B. In this case it would appear that question C-9 would not have caused B&R to demonstrate in design documents other than their procedure, the Technical Review Document (TRD), how they have treated missiles.

Q.103 Would this item have been reportable under 50.55(e)?

A.103 More information would be needed relative to whether the requirements of the TRD document had or had not been implemented in construction use drawings such as the civil/structural drawings for the buildings. I believe it's a very close call, but the item probably should have been reported as a "potential deficiency." This demonstrates the nature of engineering judgment and the subtle difference between those items that just meet the test of significance and those that are not.

Q.104 Is the failure to report this as a Quadrex finding as a potential deficiency, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.104 No. It may well have been that HL&P personnel were familiar with B&R's handling of missiles in actual design and were not concerned with the Quadrex comment.

Q.105 Does it reflect an unwillingness to abide by regulatory requirements?

A.105 No.

Q.106 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.106 No.

Q.107 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.107 No.

Q.108 Have you reviewed and evaluated finding 4.3.2.1(a)?

A.108 This item relates primarily to Failure Mode and Effects Analysis, and the application of the single failure criterion as did generic finding 3.1(e) with a somewhat greater emphasis on one example which is also part of 3.1(e). My findings pertaining to 3.1(e) are also appropriate to this item.

Q.109 Have you reviewed finding 4.3.2.1(n)?

A.109 In summary, this finding indicates that B&R had not developed application guidance for their engineers in the use of various electrical isolation schemes.

Q.110 Is this lack of a guidance document a violation of Appendix B or any other NRC requirement that you are aware of?

A.110 I do not feel that a violation could have existed until a design had been developed that provided an application that in some manner violated design criteria. Let me say that application of fuses and relays to obtain electrical circuit isolation is nearly as old as the electrical

and electronic industry. The newer photo-optical devices that have now been used for several years were originally developed by component level engineers/manufacturers who provided typical application data to the user, generally initially by catalogues. When a user bought the product, the user was provided with a data sheet providing more specific information. This practice has been largely standard to a wide range of electronic products for long periods of time. In summary, it would be entirely possible for a user engineer such as at B&R to develop entirely satisfactory final designs without the guidance document that Quadrex apparently felt was necessary.

Q.111 Would absence of such a guidance document have been reportable under 50.55(e)?

A.111 Since it is apparent in reading the Quadrex supporting information, that few if any design outputs had as yet been developed by B&R at the time of the audit, no deficiency existed within the meaning of 50.55(e) and, therefore, no report would have been required.

Q.112 Is the failure to report this Quadrex finding, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.112 No.

Q.113 Does it reflect an unwillingness to abide by regulatory requirements?

A.113 No.

Q.114 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.114 No.

Q.115 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.115 No.

Q.116 Have you reviewed and evaluated finding 4.3.2.1(d)?

A.116 Yes. I find it to be reflected in a portion of generic finding 3.1(a) coupled with a portion of generic finding 3.1(e) in that they deal with the single failure criterion and physical separation.

Q.117 Should the absence of formal methodology or documentation been reported to the NRC?

A.117 Again, the examples cited by Quadrex do not tell the reader that an actual or potential deficiency exists in the design. Therefore, a significant deficiency report in accordance with 10 CFR 50.55(e) would have been inappropriate.

Q.118 Is the fact that this Quadrex finding was not reported, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.118 No.

Q.119 Does it reflect an unwillingness to abide by regulatory requirements?

A.119 No.

Q.120 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.120 No.

Q.121 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.121 No.

Q.122 Have you reviewed and evaluated finding 4.5.2.1(b)?

A.122 Yes. In essence, Quadrex found that B&P had used preliminary design input information from EDS and that EDS had not subjected it to the design review process.

Q.123 What is your evaluation regarding this item?

A.123 The Quadrex finding here is substantially the same as that contained in generic finding 3.1(j) only with more specificity. I believe that my comments relative to that generic finding are appropriate to this finding. I perhaps should supplement my comment to 3.1(j) to make it clearer what was meant by risk and benefits. Let me say first that I have been involved for about 25 years in heavy field construction of various types including both nuclear construction and earlier, ballistic missile launch site construction. Nearly all these projects have used a philosophy of nearly concurrent design and construction. As an example, the construction of building foundations may proceed well before the final loads on the foundation are known. The foundation designer makes certain assumptions largely based on judgment of what these loads will ultimately be. Generally, the assumptions are so conservative that when the loads are finally available and the design verification process can begin, the foundation will be found to be substantially over designed or in other words, not loaded to the extent originally contemplated. The net effect is that the design margin for the foundation will turn out to be higher than would have been the case if the design had been delayed awaiting the final load values.

Q.124 Would this situation constitute a violation of Appendix B?

A.124 Not until a nonconservative design is found to exist.

Q.125 Was a nonconservative design apparent or strongly suspected in this case?

A.125 No. This was not shown.

Q.126 Is the fact that this Quadrex finding was not reported, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.126 No.

Q.127 Does it reflect an unwillingness to abide by regulatory requirements?

A.127 No.

Q.128 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.128 No.

Q.129 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.129 No.

Q.130 Have you reviewed finding 4.6.2.1(n)?

A.130 Yes. It is a reiteration of a portion of generic finding 3.1(c) relative to the essential cooling water pond.

Q.131 Does the item constitute a violation of Appendix B?

A.131 As I indicated in my response to generic finding 3.1(c), based on the information presented, I would have made this an "unresolved item" for an NRC inspection report considering the 1980 guidance as interpreted in 1981. There is not enough information in the data reviewed to ascertain whether a formal violation of Appendix B existed. The unresolved item would have required the licensee to provide additional information in order to determine if a violation existed.

Q.132 Should the licensee have reported the item to the NRC?

A.132 As in my testimony with regard to generic finding 3.1(c), I believe that the licensee should have reported the item as a "potential" 50.55(e) item subject to further information gathering and evaluation.

Q.133 Was the problem with the ECP reported to the NRC?

A.133 Yes. The evaluated temperature of the ECP under certain conditions was confirmed by Bechtel analysis and reported as a potential 50.55(e) item on October 19, 1982. It was subsequently withdrawn on December 9, 1982,

on the basis that all safety-related components would perform properly even though the cooling water supply to them was higher in temperature than originally contemplated.

Q.134 What effect has this report had on your analysis of the Quadrex finding?

A.134 I believe that there was sufficient information in the assessment of question N-17 to have caused the items to have been reported as a potential 50.55(e) item upon immediate review of the Quadrex report and therefore my conclusion has not been changed.

Q.135 Is the failure to report this Quadrex finding, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.135 No. The decision to report or not report probably was very closely based upon all of the information contained in question N-17. I think that my conclusion simply reflects a somewhat lower threshold relative to what is or is not reportable.

Q.136 Does it reflect an unwillingness to abide by regulatory requirements?

A.136 No.

Q.137 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.137 No.

Q.138 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.138 In my opinion, no. As I stated previously, the difference between my conclusion and their initial decision was a matter of engineering judgment. I would have selected the more conservative approach suggested by Quadrex. As a final outcome, however, the item was eventually dispositioned as not reportable.

Q.139 Have you reviewed and evaluated finding 4.7.3.1(a) and 4.7.3.1(b)?

A.139 I have. My analysis of each finding leads me to a common conclusion. It is also necessary to consider the precursor statements for each item.

Q.140 What is your conclusion?

A.140 After reviewing the example cited in conjunction with each item, it appears that Quadrex was primarily concerned with the fact the B&R and/or EDS has not developed criteria that would be necessary to complete a final design of piping systems and that this might interfere with the licensing of the plant since it could be possible that significant engineering changes might have to be made to existing designs as the new information became available.

Q.141 Would this lack of engineering information at the appropriate point in time be a violation of Appendix B?

A.141 No. Criterion III of Appendix B and the N45.2.11 both reflect that changes to design may well be necessary and that so long as the QA program for design activities provides appropriate controls for the changes, there would be no violation. The information contained in the Quadrex report subject to my review has not led me to believe that controls are inadequate.

Q.142 Should the licensee have reported either of these items to the NRC under 50.55(e)?

A.142 No. There was no design deficiency.

Q.143 Is the fact that this Quadrex finding was not reported, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P.

A.143 No.

Q.144 Does it reflect an unwillingness to abide by regulatory requirements?

A.144 No.

Q.145 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.145 No.

Q.146 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.146 No.

Q.147 Have you reviewed finding 4.7.3.1(k)?

A.147 Yes. It seems to involve a difference of opinion between B&R and the Quadrex reviewer as to what is an adequate method to predict loads at those piping run points where there is a transition of seismic to nonseismic both in terms of analysis methods and means of support of the pipe. What is unclear, however, is whether the method outlined by B&R was described and justified in the SAR and whether, in fact, the B&R criteria were used in completed design work. In the B&R response to question P-29, under the 3-25 date line, there is an inference that the criteria had not yet been used since the term "will be" is used twice. The Quadrex reviewer also indicates that the B&R criteria was developed on the basis of engineering judgment by experienced personnel which in turn constitutes a basic design assumption.

Q.148 Does this concern be represent a violation of Appendix B?

A.148 No. As stated before, Appendix B is intended to establish certain basic management controls, in this case over the design process. The controls may have been completely in place, there is no information to indicate otherwise, and yet the resultant design may not be adequate, this is why the design review, construction process control, inspection and test provisions are provided.

Q.149 Should the licensee have reported this matter to the NRC under the requirements of 50.55(e)?

A.149 I believe that the licensee probably should have made such a report as a "potential" based mostly on the strength of the Quadrex reviewers assertion in the assessment of question P-29.

Q.150 Is the failure to report this Quadrex finding, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.150 No. HL&P personnel may have had knowledge of the situation that would have subtracted from the strength of the Quadrex reviewers assertion.

Q.151 Does it reflect an unwillingness to abide by regulatory requirements?

A.151 No.

Q.152 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.152 No.

Q.153 Does the fact that HL&P did not report this Quadrex finding reflect adversely on its character or competence to operate a nuclear plant?

A.153 No.

Q.154 Have you reviewed and evaluated finding 4.8.2.1(a)?

A.154 Yes. First of all, let me note that (a) has been previously discussed in connection with generic finding 3.1(e) and was apparently intended by Quadrex to be separated from their concern with ALARA as indicated by the format of the paragraph. The balance of my answer is directed toward subparagraphs (b) through (g). I would like to point out that the regulations regarding ALARA goes well beyond 10 CFR Part 20. As an example, Part 50.34(a) requires any application for a permit to construct a nuclear power reactor filed on or after January 2, 1971 to contain considerable information on how the facility will be designed to comply with the ALARA concept. Since STP was docketed in mid-July 1974, much of the design base to comply with ALARA was included and was accepted as evidenced by issuance of the CP at the end of 1975. I would further note that 50.36(a) requires submittal of Technical Specification requirements relative to ALARA. The FSAR generally contains the

licensee's recommendations for the contents of the Technical Specifications that will be appropriately modified by the NRC and becomes Appendix A of the OL. Appendix I to 10 CFR 50 also contains guidelines for assessing compliance to the previously indicated parts of Part 50. In essence the NRC is heavily involved in assuring that a licensee does fulfill the ALARA concept both in the design of the facility and its later operation. Taken in this light, the Quadrex preamble to subparagraphs (b) through (g) is that their concerns are in regard to "licensability" rather than that the designs are actually deficient. My view after reading the support references is that the designs and verification thereof had in reality not progressed as far as Quadrex expected and that if B&R didn't do a better job, they would not provide input to the NRC that would satisfy the NRC sufficiently to allow an OL to be issued.

Q.155 Should any part or all of the issues contained in this paragraph have been submitted to the NRC under 50.55(e)?

A.155 It is my understanding that the licensee did identify that part of (d) related to the safety classification of shielding systems was a potentially reportable item on May 8, 1981, but later withdrew the report on the basis that further examination indicated that it did not fit the requirements of 50.55(e). On the basis that incomplete design does not necessarily indicate deficient design, I find no condition in the Quadrex findings that would fall within the purview of 50.55(e). The only possible connection would be the comment that B&R had not

established minimum qualifications for ALARA design reviewers. I have previously noted that I have found no requirements for establishing a set of minimum qualifications for engineers within NRC regulations nor has such a requirement been found in adapted subsidiary standards. Neither the matter of personnel minimum qualifications nor any of the Quadrex comments indicate to me that any part of the design QA program has been violated.

Q.156 Could you provide us with your assessment of whether you believe the entire Quadrex report should have been reported to the NRC in accordance with the requirements of 10 CFR 50.55(e) within the time frame required by the regulation?

A.156 As to my assessment of the reportability of the Quadrex report, I have a perception that the primary thrust of the Quadrex comments was that it found B&R to have little in the terms of documented design guidance for a group of engineers that the Quadrex people considered to be inexperienced in nuclear work and that the B&R groups were subject to fairly high turnover rates. There was a concern that newly hired engineers would have difficulty in determining what the design basis was without these higher level design guidance documents. Most of the engineering firms that I have any knowledge of have had design manuals that are generally promulgated by the immediate staff of each engineering discipline chief engineer for the use of engineers assigned to a project staff. The most important purpose of these manuals has been to provide a consistent design basis from project to project,

particularly when several design projects are going forward at the same time. For a one project A/E, these manuals might be seen as unnecessary since the chief engineers could provide such guidance on a day-to-day basis. As pointed out previously, I have found no requirement that such manuals must exist as a prerequisite to performing design work.

Another perception on my part, was that the design development process had progressed far less than Quadrex thought was reasonable for the construction status of the project. My impression gained from reading the report was that Quadrex found that the design in such areas as HVAC, piping and pipe supports, and electrical had not yet started through the iterations necessary to make it final. Apparently what they expected to see was a mature engineering project and their comments are reflective of this condition. Tending to support this conclusion are many instances where the B&R response to the Quadrex questions are phrased in future tense which implies that the engineering has not at that time culminated in a substantially complete design.

If my perceptions of the condition of the design effort at the time of the Quadrex effort are substantially correct, then I would say that the report as a whole was not reportable. A deficiency within the context of 50.55(e) doesn't exist simply because the design work is substantially incomplete. If the reverse logic were applied, it would then follow that the day the construction permit is issued, the licensee would immediately have to report that he had deficiencies in the design

because much of the design work would not have started at a detail level in many areas.

Q.157 Is the failure to report this Quadrex report, in your view, an indication of a lack of candor or truthfulness on the part of the management of HL&P?

A.157 No.

Q.158 Does it reflect an unwillingness to abide by regulatory requirements?

A.158 No.

Q.159 Does it in any way indicate an abdication of, or refusal to accept, the responsibility to protect the health and safety of the public?

A.159 No.

Q.160 Does the fact that HL&P did not report the Quadrex report reflect adversely on its character or competence to operate a nuclear plant?

A.160 No.

Q.161 Mr. Taylor, to what extent are the views you have expressed in your testimony influenced or based on the conclusion reached previously by the staff in NUREG-0948?

A.161 They are entirely independent, since I did not review NUREG-0948 until after preparation of my analysis and testimony was substantively complete except for editorial changes. I sought to analyze the Quadrex Report on the same basis as if I were the NRC inspector reviewing the licensee's actions regarding the Quadrex Report and its reportability immediately after the licensee had completed his review.

Q.162 After preparing the preceding testimony, have you reviewed NUREG-0948?

A.162 Yes, I have.

Q.163 Is there any information or findings therein which lead you to believe that your previous testimony should be altered?

A.163 No. Given what information existed at the time the Quadrex Report was originally presented, my views as to its reportability under 50.55(e) remain the same after reviewing NUREG-0948.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

| | | |
|-------------------------------------|---|--------------------|
| In the Matter of | } | |
| HOUSTON LIGHTING AND POWER COMPANY, | } | Docket Nos. 50-498 |
| <u>ET AL.</u> | } | 50-499 |
| (South Texas Project, Units 1 & 2) | } | |

Testimony of Robert F. Heishman

Q.1 Would you please state your name and your position?

A.1 My name is Robert F. Heishman. I am Chief of the Reactor Construction Programs Branch, Division of Inspection Programs, Office of Inspection and Enforcement, Nuclear Regulatory Commission, Washington, DC 20555.

Q.2 What are your professional qualifications?

A.2 They are set out in my attached statement of professional qualifications.

Q.3 What guidance relative to construction Deficiency Reporting has been provided to inspectors and supervisors?

A.3 Reportability of significant construction deficiencies under 10 CFR 50.55(e) has historically been subject to various interpretations. To address these differences, the Office of Inspection and Enforcement (IE) has issued guidance for use by inspectors and supervisors as a part of the IE Manual. This guidance has been changed from time to time with the latest change issued in 1980. Copies of this guidance has previously been provided to the Board in the Staff submittal of August 24, 1984 (another copy attached). This guidance does allow for the application of judgment as to the reportability of construction deficiencies and this fact is exemplified by the current review of 10 CFR 50.55(e) and 10 CFR 21 to more clearly indicate the intent of these rules.

R. F. HEISHMAN

PROFESSIONAL QUALIFICATIONS
CHIEF, REACTOR CONSTRUCTION PROGRAMS BRANCH
DIVISION OF QUALITY ASSURANCE, SAFEGUARDS, AND INSPECTION PROGRAMS
OFFICE OF INSPECTION AND ENFORCEMENT
U. S. NUCLEAR REGULATORY COMMISSION

I am Chief of the Reactor Construction Programs Branch in the Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Bethesda, MD. In this position, I am responsible for the development and maintenance of inspection programs for reactors under construction, evaluating the implementation of these programs by the Regional offices and assessing the effectiveness of these programs including the conducting of Construction Appraisal Team inspections at selected facilities. I have been assigned to this position since early 1982.

During the period September 1981 - January 1982, I was the supervisor of the Performance Appraisal Team which conducted indepth team inspections of selected reactors in operation from the Bethesda, MD office.

From February 1979 - August 1981, I was assigned as Branch Chief of the Reactor Operations and Nuclear Support Branch in the NRC Regional Office in Chicago, IL. In this position, I managed the inspection program for the reactors in operation in the midwestern U.S.

I was assigned as Branch Chief of the Reactor Construction and Engineering Support Branch from October 1976 - February 1979. This assignment included the responsibility for the management of the inspection program for reactors under construction in the midwestern U.S.

From October 1969 - October 1976, I served in the NRC Regional office located near Philadelphia, PA. During this time, I served as a reactor inspector for operating, research and construction reactors and as a first-line supervisor for these programs.

During the period 1959 - 1969, I was a member of the U.S. Army Engineer Reactors Group serving on numerous military reactor systems as operator, supervisor and plant manager.

I am a graduate of the Army Nuclear Power Program and have attended Upper Iowa University.

Guidance - 10 CFR 50.55(e), Construction Deficiency Reporting

1. PURPOSE

Deficiency reporting based on the requirements of Part 50.55(e) is designed to provide the NRC staff with prompt notification and timely information of deficiencies encountered during construction of nuclear power plants. The intent of the Rule is to provide a basis for evaluation on the part of the NRC with respect to potential safety consequences of deficiencies and the need for further action by NRC.

2. DISCUSSION - GENERAL

The conditions of construction permits are contained in 10 CFR 50.55. Subpart 10 CFR 50.55(e) imposes a reporting requirement on construction permit (CP) holders to report each deficiency found in design and construction which if it were to have remain uncorrected could have adversely affected the safety of operations of the nuclear facility at any time throughout the expected lifetime of the plant. Reporting is limited to deficiencies which meet certain other requirements as discussed below.

3. RESTATEMENT OF THE REGULATION

The entire subsection of 10 CFR 50.55(e) is included here for convenience.

50.55(e)(1) If the permit is for construction of a nuclear power plant, the holder of the permit shall notify the Commission of each deficiency found in design and construction, which, were it to have remained uncorrected, could have affected adversely the safety of operations of the nuclear power plant at any time throughout the expected lifetime of the plant, and which represents:

- (i) A significant breakdown in any portion of the quality assurance program conducted in accordance with the requirements of Appendix B; or
- (ii) A significant deficiency in final design as approved and released for construction such that the design does not conform to the criteria and bases stated in the safety analysis report or construction permit; or
- (iii) A significant deficiency in construction of or significant damage to a structure, system, or component which will require extensive evaluation, extensive redesign, or extensive repair to meet the criteria and bases stated in the safety analysis report or construction permit or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety function; or

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- (iv) A significant deviation from performance specifications which will require extensive evaluation, extensive redesign, or extensive repair to establish the adequacy of a structure, system, or component to meet the criteria and bases stated in the safety analysis report or construction permit or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety function.
- (2) The holder of a construction permit shall within 24 hours notify the appropriate Nuclear Regulatory Commission Inspection and Enforcement Regional Office of each reportable deficiency.
- (3) The holder of a construction permit shall also submit a written report on a reportable deficiency within thirty (30) days to the appropriate NRC Regional Office shown in Appendix D of Part 20 of this chapter. Copies of such report shall be sent to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. The report shall include a description of the deficiency, an analysis of the safety implications and the corrective action taken, and sufficient information to permit analysis and evaluation of the deficiency and of the corrective action. If sufficient information is not available for a definitive report to be submitted within 30 days, an interim report containing all available information shall be filed, together with a statement as to when a complete report will be filed.
- (4) Remedial action may be taken both prior to and after notification of the Division of Inspection and Enforcement subject to the risk of subsequent disapproval of such action by the Commission.

4. APPLICABILITY

Subsection 10 CFR 50.55(e) applies to the CP holder and his contractors. The CP holder is responsible for reporting each deficiency in accordance with the criteria and requirements of 10 CFR 50.55(e). The regulation applies to design and construction and encompasses all of the activities inherent in design and construction even though they may be performed by agents, contractors, subcontractors or consultants. The CP holder must establish and implement a system that assures all reportable deficiencies are identified and reported and the reporting requirement must be imposed on his agents, contractors and subcontractors.

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5. CRITERIA FOR REPORTING

a. Deficiency

- (1) must have been identified, i.e., found
- (2) related to activities conducted as authorized by a construction permit holder (design, construction or modification)
- (3) could adversely affect the safe operation of a facility if it were not corrected, i.e., it is significant
- (4) significant deficiency relates to one or more of the following:
 - (a) breakdown in QA program
 - (b) design released for construction
 - (c) damage to a structure, system, or component
 - (d) construction of a structure, system, or component
 - (e) deviation from performance specifications

b. Timeliness

- (1) Initial report - within 24 hours
- (2) Written report - within 30 days (initial or final)
- (3) Supplemental written report(s) as necessary to provide all information.

c. Reporting Organization

The CP holder is responsible for implementing instructions which will provide for licensee reporting of all reportable deficiencies identified by organizations authorized by him to conduct construction phase activities.

6. CLARIFICATION OF 50.55(e) PHRASES

a. Could adversely affect

If a deficiency meets all the criteria and it could affect adversely safe operations of the facility, it is reportable. "Could" does not imply that it would absolutely adversely affect safe operations. It implies a probability that safe operations may be adversely affected if the proper conditions existed. "At any time" means that all service and accident conditions of operation must be considered.

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The fact that a deficiency is obvious and could not possibly go uncorrected and therefore could not adversely affect safe operation does not negate the requirement to formally report the deficiency if it meets the criteria of 50.55(e).

b. Significance

To be reportable under 10 CFR 50.55(e) a deficiency must be significant. Significant is interpreted as having an effect or likely to have an effect on, or influence, the safe operation of the facility in an adverse manner.

Although "significant" is not defined in 50.55(e), it is not the intent that trivia be reported. Significance primarily pertains to operational safety and not to the cost of the corrective action. However, as indicated below, the cost to repair or redesign provides an indicator of the term "extensive." Trivial situations such as cosmetic defects are not reportable.

The test of significance includes but is not limited to safety related items/activities as discussed below.

- (1) It is important to note that the regulation does not specifically state that 50.55(e) applies only to safety related structures, systems and components although this may be inferred from the wording.

The 50.55(e) requirement applies to any structure, system or component (SSCs) if it contains a deficiency which were it to have remained uncorrected could have affected adversely the safety of operation of the facility. This includes those SSCs that, even if not classified as safety related, could cause or contribute to the degradation of integral plant safety as a result of an adverse interaction with safety related SSCs. Primary examples of this are undesirable conditions or failures in a nonsafety system, structure, or component which could impact or degrade safety systems or a safety function.

The inspector must use caution in applying 50.55(e) to nonsafety SSCs and must satisfy himself that the licensee has considered the interactions that a deficiency in a nonsafety SSC could create.

- (2) If a deficiency involves inadequate management reviews, it may be significant.

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c. Extensive

An item is reportable if it requires extensive evaluation to determine if it is adequate to perform its intended safety function or will not impair the accomplishment of a safety function through adverse interaction.

Extensive means the expenditure of resources (time, manpower, money) to a degree disproportionate with the original design, test or construction expenditure. The inspector should use caution - this requires judgement and experience. For example, the lack of extensive evaluation may be used as a justification for not reporting. But it also may indicate an inadequate evaluation due to expense involved or a failure to consider interactions and therefore should be considered suspect.

Redesign may appear to be not extensive; the inspector should verify that all interactions and interfaces have been considered and that sufficient design margin is available.

d. Significant Breakdown in Quality Assurance

A breakdown in the QA program related to any criteria in 10 CFR 50, Appendix B, may be a reportable deficiency depending upon its significance. This applies to those design and construction activities affecting the safety of plant operations, including activities such as design verification, inspection, and auditing. For example, QA program breakdown may result from an improper identification system for safety related materials. More specifically, the implementing procedures may be incomplete or otherwise inadequate, or the execution of adequate procedures may be incomplete, improper or completely ignored. In the latter case, not following established procedures to assure that specified quality related requirements are met, for example, may constitute a breakdown in the QA program that is reportable.

Similarly, an inadequate record keeping system that makes it impossible on a broad scale to determine whether quality requirements have been met, is another example. In such a case extensive evaluation and testing may be required to establish that applicable requirements have been met.

Conversely, occasional, incomplete or otherwise inadequate records that do not indicate a significant breakdown in the QA program nor an unsafe condition are not considered reportable. For example, if during site construction, delivery times (from mixing to placing) of a few of many truckloads of concrete are not recorded as required, and it can be shown by other records that requirements important to safety have been met, the matter would not be reportable. These other records may be related concrete truck trip tickets, batch plant records or acceptable test results of concrete samples representing concrete from these trucks. The lack of complete records in this example would not lead to unsafe plant operation, nor would it constitute a significant breakdown in the QA Program.

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e. Notification and Reporting

(1) Notification - Reportable Deficiency

10 CFR 50.55(e)(2) specifies that the CP holder shall notify the appropriate NRC Regional Office within 24 hours of each reportable deficiency. Notification means: (a) telephone report; (b) telegraphic report; and (c) verbal report

to the NRC Regional Office after becoming aware of a reportable deficiency, excluding holiday or weekend elapsed times. A notification to a NRC representative present at the CP holder's facilities does not satisfy the regulation.

The threshold for notification (not reporting) is considered to be within 24 hours after licensee (CP holder) becomes aware of the reportable deficiency (or potentially reportable deficiency as clarified below). Aware of the deficiency means that any cognizant licensee individual has knowledge of the deficiency as a result of:

- (d) observation of condition
- (e) a formal submittal by any organization involved in the design, construction, evaluations or inspection of the facility
- (f) an informal report, or allegation, by any organization or person.

(2) Notification - Potentially Reportable Deficiency

All of the reportability criteria of 50.55(e) may not be satisfied when a deficiency is initially discovered. It is not always possible for the licensee to decide promptly during an evaluation whether the identified deficiency is reportable. However, in most cases, significance can be partially satisfied, or sound judgement will indicate potential significance. In these cases, it should be considered that the deficiency is a potentially reportable deficiency, and the Regional Office should be notified. The CP holder should specify that it is a potentially reportable deficiency.

The following IE position has been established to alleviate the apparent conflict between prompt notification and necessary evaluation time for those cases where an extended period of time could lapse in completing a adequate evaluation of the identified deficiency:

Notification by telephone to the Regional Office within 24 hours after a cognizant licensee individual becomes aware of a potentially reportable deficiency is considered acceptable. A potentially reportable deficiency is considered to exist

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when: (1) an initial prompt review of available information indicates that the problem could be significant (i.e. - partial significance is established) but, for various reasons, additional time is required to complete the evaluation; and (2) the deficiency may be considered significant, but neither a prompt review or full evaluation can be completed within 14 days due to lack of specific information.

For example, an extensive evaluation period may exist when the licensee cannot determine without testing and analysis whether the physical properties relative to the material used for a section of reactor coolant piping were met, the licensee should promptly notify the Regional Office of this matter. If the results of the above analysis indicates that the material is not acceptable, extensive evaluation and/or rework may be required. If this is the case, it is clearly a reportable deficiency. Conversely, if the analysis in the above example confirms acceptability of the material, the licensee should document these results in his records and notify the Regional Office that this deficiency was determined not to be significant based on the results of further analysis or investigation. Consequently, some matters which require notification may not, subsequently, require a written report.

In summary, the intent is to require a prompt notification in cases where a potentially reportable deficiency has been identified but the formal evaluation required to confirm whether the item is reportable can not be completed immediately.

(3) Interim Report

The CP holder may meet the 30 day written report requirement by submitting an interim report in lieu of the complete report if sufficient information is not available for a definitive report. The interim report should specify:

- (a) the potential problem and reference the notification
- (b) approach to resolution of the problem
- (c) status of proposed resolution
- (d) reasons why a final report will be delayed
- (e) projected completion of corrective action and submittal date of the complete report.

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(4) Complete Report

The regulation requires that the CP holder submit a written report to the appropriate Regional office within 30 days after initial notification. If an interim report is submitted the final report shall be due on the date committed in the interim report. The complete report shall contain:

- (a) description of the deficiency
- (b) analysis of the safety implications. This should include an identification of interfacing systems and possible interactions.
- (c) corrective actions taken. Corrective actions should be sufficient to correct the deficiency and prevent future identical or similar occurrences. To prevent future occurrences the causes of the deficiency must be fully explored and identified.
- (d) sufficient information to permit analysis and evaluation of the deficiency and of the corrective action.

7. ENFORCEMENT

If a CP holder is aware of a reportable deficiency and it can be shown by objective evidence that he has not met the time reporting requirements, then he is in noncompliance with the reporting requirement of 50.55(e) and enforcement action should be taken.

The licensee should be encouraged to discuss "reportability" with the responsible IE inspector whenever he has a question or doubt regarding this matter. It is appropriate for the inspector to indicate his views on whether a particular matter is reportable, but the licensee should understand that the ultimate responsibility remains with the licensee, and the inspector's judgement may change during a future inspection wherein he has an opportunity to fully review the circumstances associated with the matter.

Another aspect of this Regulation related to reportability determination pertains to judgement--judgement used by the licensee in determining whether a matter is reportable. The licensee has to make a judgement based on his (or others) evaluation/analysis. If the licensee decides, on the basis of the above, that a matter is not reportable, he may have satisfied the intent of this part of the Regulation. However, the inspector can exercise his option and challenge the licensee's decision of nonreportability. A challenge may be valid if:

- . the evaluation is clearly faulty by way of omission of facts
- . engineering or other calculations are in error

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- the evaluation is not supported by adequate records
- the evaluation has not considered interactions
- past IE experience (including that of the inspector) provide a basis as precedent for reportability
- the licensee has established a trend or pattern of habitually evaluating deficiencies as non-reportable
- evaluation is performed by a person(s) or organization without expertise in the subject.

The inspector has the right and the responsibility to examine the technical validity of the licensee evaluation and if an inappropriate or unsupported decision of nonreportability has been made by the licensee, enforcement action should be considered. Regional management should review and, when valid, determine the appropriate enforcement action to take. If there is evidence that superficial evaluations are being made to procedurally satisfy or bypass NRC requirements, strong escalated enforcement action should be considered. (MC-0800 will be changed, accordingly)

8. RELATION TO APP. B REQUIREMENTS

10 CFR 50, Appendix B, requires procedures to be established and records maintained to handle required actions relative to resolution of identified deficiencies. Procedures and records (as in (1) and (2) below) are required to assure prompt notification and adequate reporting under 50.55(e). Means to do this should be an integral part of each licensee's QA program.

(1) Implementing Procedures

Although the specific requirements of 50.55(e) are few (notify, evaluate, report), implementing procedures to assure that these requirements are met should be established by the CP holder. For example, some means (such as procedures or instructions) are required to assure that deficiencies found in design and construction activities delegated by the licensee to others are handled properly and reported in a timely manner to the CP holder. The procedures should assure that the evaluation of the significance of the deficiency to the safety of plant operations is performed by a person(s) with adequate expertise in the subject and that adequate management review is provided.

(2) Records

The licensee should maintain records to demonstrate that adequate evaluation/analysis of all deficiencies was made regarding the impact on safe operations. It is appropriate for the IE inspector to inform the licensee that without such records the appropriate licensee management cannot establish whether such evaluations were made or whether the NRC requirements associated with this activity were overlooked.

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9. RELATIONSHIP TO 10 CFR 21 REPORTING

Reporting of Defects and Noncompliances (10 CFR 21) imposes a reporting requirement on licensees and permit holders to immediately notify the Commission of defects, in basic components or the facility which could create a substantial safety hazard. There are certain situations which can result in duplicate reporting of the same defect under 50.55(e) and Part 21 requirements. Guidance that duplicate reporting is not the intent of the NRC regulations has been promulgated via NUREG-0302, Rev. 1 and in correspondence supplied to the Atomic Industrial Forum. This guidance is reproduced below:

(1) NUREG-0302 Rev. 1 Guidance

Q. Must items reported as Significant Deficiencies (under 50.55(e)) or Reportable Occurrences (under 50.36) also be reported as required in 10 CFR 21?

A. Duplicate reporting is not required. Care should be exercised, however, to assure "that the Commission has been adequately informed" (§21.21b) and the information specified in §21.21(b)(3) is provided should the reporting party's evaluation show that a notification is required.

Q. How do we determine when to report a "problem" under the provisions of 50.55(e) vs the provisions of Part 21?

A. §50.55(e) requires initial reporting in 24 hours of the time licensee or his agent first identifies a significant deficiency. A followup report is required in 30 days. If evaluation requires substantial time to complete, interim report(s) are acceptable.

§21.21(b)(1) requires reporting within two days of when the director or responsible officer obtains information reasonably indicating a failure to comply or a defect with a written report required within five days.

In all cases, the exercise of reasonable judgement is expected in reporting potentially reportable problems to avoid the severe penalties, which could be imposed should the problem turn out to be reportable.

Q. 10 CFR 50.55(e), Conditions of Construction Permits, requires that the holder of a permit notify the Commission of certain designs and construction deficiencies which are also the subject of 10 CFR 21. Why has not 10 CFR 50.55(e) been deleted?

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A. §50.55(e) requires reporting that would not be reported under Part 21. For example, 1) significant damage to a basic component following delivery to the site is reportable under 50.55(e) and not under Part 21; and 2) a significant break down in quality assurance is reportable under 50.55(e) and not under Part 21.

Q. Is the determination of a "defect" based on the same criteria as provided in Part 50.55(e) and/or the requirements for technical specifications for operating plants?

A. No. In the case of the permit holder, however, a defect reportable under Part 21 would also be reportable under 10 CFR 50.55(e). In the case of the licensee some items could be reportable under Part 21 that are not reportable as LER.

Q. For possible problems noted under 10 CFR 50.55(e) we report to the Commission "possible significant deficiencies." Will we be allowed to report "possible defects and noncompliances" under the requirements of 10 CFR Part 21?

A. Yes, a report may be made during the evaluation before the conclusion is reached that the deviation is a defect. A report is not required, however, until 2 days after the responsible officer or director is informed of the conclusion reached as a result of the evaluation.

Q. It appears to us that there will be more reports filed with the Commission under the requirements of 10 CFR Part 21 than under 10 CFR 50.55(e). Does the Commission have this same belief?

A. No. The majority of items subject to reporting under 50.55(e) would not fit the definition in Part 21 for a "defect" involving a "substantial safety hazard." For those cases where both 50.55(e) and Part 21 reporting requirements may apply, it is expected that permit holders will report only under 50.55(e) as long as they include the information required by Part 21 to adequately inform the Commission.

(2) Supplemental Guidance Supplied to Atomic Industrial Forum on Q/A 15 and 16 Under 21.21(b)(1) of NUREG 0302, Rev. 1

The regions are authorized to use the enclosed staff positions on 10 CFR Part 21 in communications with licensees. These positions were prepared in response to inquiries from AIF and supplement those of NUREG 0302, Rev. 1. In particular, until pertinent reporting regulations are amended, the staff position response to AIF should be used in answering licensee questions on how and when 50.55(e) reporting may be used in lieu of dual reporting under both 50.55(e) and Part 21.

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When a combined 50.55(e)/Part 21 event is reported by a licensee to the regional office by telephone, the region should use §50.55(e)(3) and §21.21(b)(3) information requirements for guidance to assure that the Commission is "adequately informed." Where an event is reported under 50.55(e) and it is (subsequently) established that the event is also reportable under Part 21 the licensee should be informed that it is acceptable for the licensee to provide the information required under §21.21(b)(3) via a supplement to the initial 50.55(e) report. (From N. Moseley to Reg. Director memo of 5/8/79 forwarding 4/26/78 letter sent to AIF)

It is the staff's position that the licensee is not required to report under Part 21 an occurrence that falls within the scope of either Part 21 or 50.55(e) or Reg. Guide 1.16 if that occurrence is reported in accordance with 50.55(e) or Reg. Guide 1.16 requirements. In such cases, it is also the staff's position that the time requirements (oral, 24 hours under 50.55(e) and R.G. 1.16) of the reporting method used would be controlling and, for the licensee, the Part 21 reporting times would not be applicable. (Does not change prior staff position relative to information (21.21(b)(3)) requirements)

However, a director or responsible officer of a non-licensee organization upon receiving information of a reportable defect would be subject to Part 21 reporting time requirements unless he has actual knowledge the Commission has been adequately informed. Therefore, in those cases where a non-licensee has provided the licensee, or licensees (i.e., the defect is generic in nature) with the reportable information and that information is in fact reported by the licensee(s), the non-licensee is not required to duplicate the reporting.

In this instance it is also the staff's position that the non-licensee must have actual knowledge that the reporting was executed prior to expiration of applicable Part 21 reporting time requirements before he would be relieved of reporting the defect.

It should also be noted that non-licensees are not relieved of reporting until the Commission is "adequately informed." Your attention is specifically directed to §21.21(b)(3)(vi). If licensee 50.55(e) report(s) do not adequately address the generic applicability, i.e., information on all such components, which the non-licensee may be uniquely qualified to provide, the Part 21 reporting responsibility would remain with the non-licensee for providing that part of the unreported information.

The reverse is not true because Section 50.55(e) does not have a provision like that included under §21.21(b) (last sentence) to relieve the licensee of reporting under 50.55(e) where he had actual knowledge that the Commission has been adequately informed via a Part 21 report. However, the staff has stated that where

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the Part 21 report includes all information required for 50.55(e) reporting it would be acceptable for the licensee's 50.55(e) report to simply reference the previously submitted Part 21 report.

(3) Additional Guidance - Information Notice 79-30

Recent IE experience (i.e., enforcement issued to S&W, B&W and 5 Region II licensees) clarifies - "The staff position permitting alternate reporting via 50.55(e) or LER of a defect was intended to avoid duplicate reporting of the same event. The use of alternate reporting methods by a licensee does not relieve him from assuring compliance with 10 CFR Part 21. Therefore, each licensee must maintain a system which will assure compliance with all requirements of 10 CFR Part 21 and, in particular, in cases where the deficiency being reported under an alternate method is also a 'defect', to assure that all information required under Part 21 is forwarded to the NRC via the initial or a followup written report."

10. 10 CFR 50.55(e) EVENT FLOW DIAGRAMS

The flow diagram on the following pages illustrate the sequence of steps and considerations relative to determining whether an identified construction deficiency is reportable.

Figure 1 is a duplication of the guidance previously made available to licensees via NUREG-0302, Rev. 1.

Figure 2, incorporates the IE position for assuring prompt reporting of reportable and potentially reportable deficiencies.

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FIGURE 1

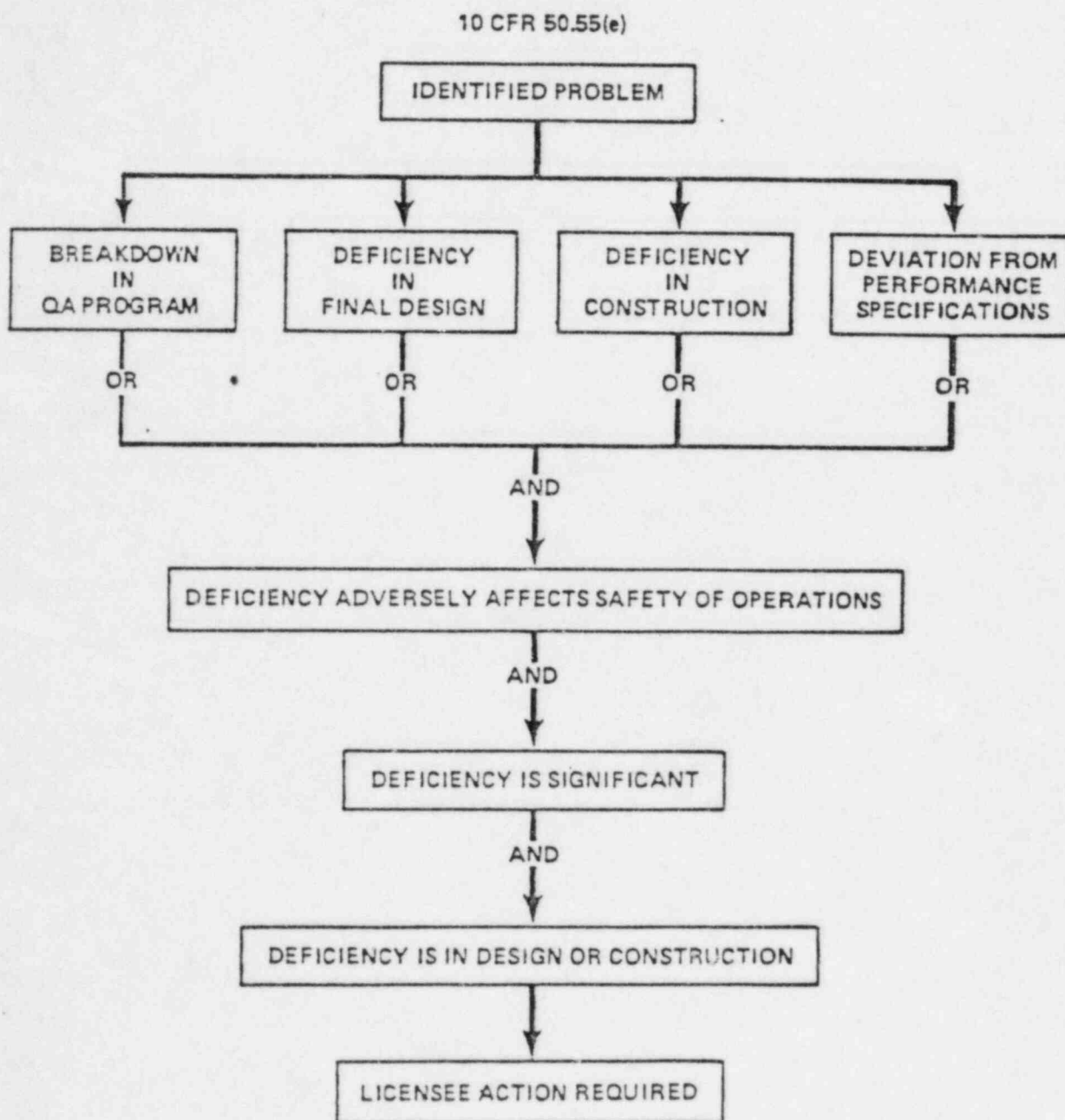
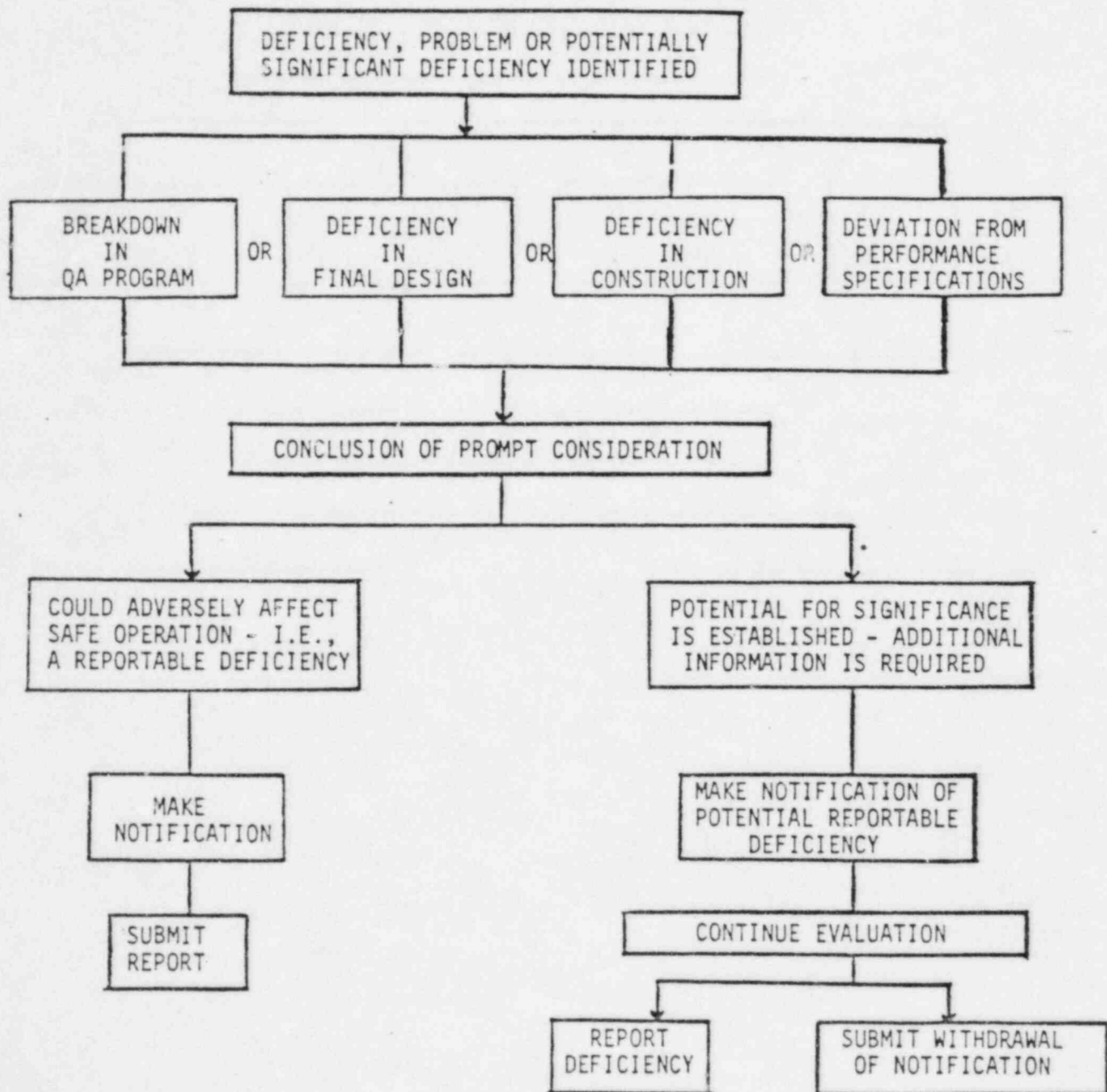


FIGURE 2

10 CFR 50.55(e) - IE POSITION



1 Q (By Mr. Pirfo) Mr. Heishman, attached to your
2 testimony is a document entitled guidance, 10 CFR 50
3 55(e) construction deficiency reporting. You are
4 familiar with this document, are you not?

5 A Yes, sir.

6 Q Could you identify that for us?

7 A Yes, sir. In the IE manual, there is a section
8 entitled "Guidance for Interpretations." The purpose of
9 that section of the manual is to provide to the regional
10 inspectors and managers additional information to be used
11 which can be used as guidance, depending on the subject
12 matter that it deals with. This particular document is a
13 document which has been written and was issued in April
14 of 1980, as the latest revision to guidance regarding 10
15 CFR 50 55(e) on construction deficiency reporting.

16 MR. PIRFO: Mr. Chairman, at this time I would
17 ask this document be marked as staff Exhibit 137.

18 I asked it be marked, I didn't get a ruling.

19 Well, I've asked it be marked for
20 identification. Has it been marked?

21 (Staff Exhibit 137 marked
22 for identification.)

23 MR. PIRFO: I would now move it into evidence.

24 MR. GUTTERMAN: I've got no objection to it
25 being received into evidence.

1 MR. SINKIN: No objection.

2 JUDGE BECHHOEFER: Staff Exhibit 137 will be so
3 marked and admitted into evidence.

4 (Staff Exhibit No. 137
5 received in evidence.)

6 Q (By Mr. Pirfo) Mr. Taylor, I show you a
7 document which I ask be marked Staff Exhibit 136,
8 entitled "NUREG 0948, Special Inspection Report of the
9 Quadrex Corporation, Report on Design Review of Brown &
10 Root Engineering Work for the South Texas Project Units 1
11 and 2." Are you familiar with this document?

12 A (By Mr. Taylor) Yes, sir, I am.

13 Q Could you briefly describe that for us, please?

14 A It's, as it is entitled, a special inspection
15 report that was prepared by Region IV with the
16 assistance, I believe, of some additional people who were
17 consultants to the region.

18 Purports to be an inspection of the findings of
19 Quadrex and bears a relationship to the subsequent work
20 done by Bechtel Corporation.

21 Q This is an official report of the Nuclear
22 Regulatory Commission?

23 A It is.

24 Q Is it used in the region or it has been used in
25 the region offices in the ordinary course of business?

1 A Yes, sir.

2 MR. PIRFO: I would ask that Staff Exhibit 136
3 be admitted into evidence.

4 MR. GUTTERMAN: No objection.

5 MR. SINKIN: Objection.

6 JUDGE BECHHOEFER: Staff Exhibit 136 will be
7 admitted.

8 You said no objection?

9 MR. SINKIN: Objection.

10 JUDGE BECHHOEFER: I'm sorry, I misunderstood
11 you.

12 MR. SINKIN: On NUREG 0984, the document now
13 being moved into evidence, we think it has no bearing on
14 the issues in this proceeding; in the Board's order of
15 February 26th, 1985, at Page 9, the Board states quite
16 clearly, "Nowhere in NUREG-0948, is any consideration
17 given to whether any Quadrex item parentheses
18 (individually or collectively), might have been
19 reportable as a significant breakdown in QA, pursuant to
20 10 CFR section 50.55(e)(1)(i)."

21 In other words, on the issue of whether there
22 was a significant breakdown in quality assurance
23 represented by any of the Quadrex findings, NUREG 0948 is
24 useless. Specifically what NUREG 0948 did was focus on
25 supposedly designs released for construction as the

1 standard for what should be reportable or not reportable.
2 And used that as the only standard. The Board ruled in
3 this same order that that was an erroneous interpretation
4 of 50.55(e).

5 Third, we have evidence in the record already
6 that what Quadrex looked at, is that 90 percent of what
7 Quadrex looked at, were not even design released for
8 construction. So that the -- we don't see that NUREG
9 0948 has any relevance to the issues in the proceeding;
10 was performed under an erroneous interpretation of
11 50.55(e), and mischaracterizes what the Quadrex study was
12 actually looking at.

13 In addition, and of some relevance to this
14 argument, EN-619 is cited throughout this report, a
15 document that has already been denied admission. If the
16 report were to come in, I guess the, we would ask that
17 all references to EN-619 in the report be struck, but I
18 think that the references to EN-619 demonstrate the real
19 problem with the report, and that is that it is a
20 reported that does rely to a great extent on after the
21 fact evaluations, that could not have been available to
22 the team on May the 8th, 1981, and for reasons similar to
23 EN-619, should be excluded from the record.

24 MR. PIRFO: Mr. Chairman, I point out that Mr.
25 Taylor's testimony is based on not reading NUREG 0948.

1 He points out in his testimony that he did not look at
2 0948 until after he had completed his testimony and that
3 he simply went to NUREG 0948 to see if it anyway changed
4 his testimony and it was said that in his testimony that
5 it does not.

6 Secondly, Mr. Taylor's testimony I've been
7 looking for the question while Mr. Sinkin was talking, I
8 haven't been able to find it, says that he specifically
9 based his review or based his review of the Quadrex
10 testimony with the Board's February 26th order in mind,
11 that there can be a significant breakdown in quality
12 assurance from -- before it's released for construction,
13 so that has been adopted as the law of the case and Mr.
14 Chairman has based his testimony on that principle.

15 As far as the references to EN-619, it's still
16 probative and relevant that these things that were not
17 reported were ultimately turned out to be approved by the
18 staff, if you will, as not reportable.

19 And I would also point out to the Board that
20 NUREG 0948 is relevant to 50.55(e) (1) and (ii), small
21 double I.

22 So for the purpose we've offered it, I don't
23 see any grounds for Mr. Sinkin's objection to the
24 document.

25 JUDGE BECHHOEFER: Do the Applicants have a

1 view?

2 MR. GUTTERMAN: The Applicants believe it
3 should come in for -- well, among the reasons cited by
4 the Staff, but obviously this document puts in context
5 the Quadrex findings.

6 It does address reportability. I believe, I
7 don't recall it, but I believe in addition to Mr.
8 Taylor's testimony, the testimony of Mr. Johnson and Mr.
9 Constable also address this document and address the
10 question of whether it in fact considered breakdown of
11 QA.

12 I refer the Board to Page 4 of the testimony of
13 Mr. Johnson and Mr. Constable which has been received in
14 evidence, where the staff says has Region IV recognizes
15 that a significant breakdown in any portion of the QA
16 program for design would be reportable under 50.55(e),
17 and that the Staff indicated that they did consider the
18 significant breakdown in QA had occurred in their
19 evaluation of the Quadrex findings in NUREG 0948.

20 So I think the arguments that CCANP is making
21 go if anything to the weight to be given to the report,
22 not to its admisibility. The Staff has clearly
23 represented that it is directly relevant to the issues
24 that the Board has raised in its orders that set the
25 basis for this proceeding, and CCANP is free to test, in

1 cross-examination, the weight to which this report should
2 be given. But obviously it ought to come in, in our view.

3 (No hiatus.)
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1 MR. SINKIN: Mr. Chairman, in response to
2 that, I did mean to bring up exactly how Mr. Taylor
3 addresses NUREG 0948. He does recognize the fact that
4 the Board had said that this is not a document he wanted
5 to rely on for deciding whether Quadrex findings should
6 have been reported for the very reasons I cited. So,
7 Mr. Taylor prepared his testimony without relying on it
8 and has a couple of pages attached to the end saying,
9 "And I didn't rely on it, but it wouldn't change my
10 mind."

11 Well, I don't think the report should come in
12 for the purposes of illustrating what Mr. Taylor didn't
13 rely on while doing his study. There are a lot of
14 things he didn't rely on that would then come into
15 evidence. Since that was the standard, I don't think
16 it's at all relevant or material to his testimony.

17 As far as the testimony of Mr. Johnson and Mr.
18 Constable, they do reference NUREG 0948 as a basis for
19 whether the Applicants adequately applied I&E guidance
20 and adequately reported findings in the Quadrex report.
21 Well, the objections we made to the relevance and
22 materiality of the report to this proceeding apply
23 equally to those observations by the NRC staff. The
24 fact that they are relying on a report that's not
25 relevant to the issues in this proceeding doesn't give

1 the report some relevance suddenly that it can pop into
2 the record just because they relied on it.

3 Furthermore, we did have some I guess what
4 would be in the nature of voir dire of Mr. -- well the
5 answers are no longer identified to particular people,
6 it would be Mr. Johnson and Mr. Constable, regarding the
7 Staff indication as to what was done in NUREG 0948
8 regarding the significant quality assurance breakdown.
9 It is quite clear in NUREG 0948, as the Board pointed
10 out in their February 26th order, that the only criteria
11 discussed is 50.55(e)(1)(i). And that if indeed there
12 was some consideration given to (e)(1)(ii), there was no
13 mention of that fact anywhere in 0948. So, we did have
14 a little bit of voir dire as to how they made that
15 determination.

16 But, nonetheless, if they want to testify now,
17 as Mr. Taylor has attempted to do, if they want to
18 testify now that if you apply (e)(1)(ii) you do or do
19 not report, that's one thing. But to say that a report
20 that never references that indeed did that analysis and
21 relied upon that analysis in making its determinations,
22 we think has -- just doesn't do it. I mean, there's
23 nothing in the report that indicates that's what was
24 done.

25 So, for all of those reasons we think that

1 0948 simply should not be allowed in the record and does
2 not contribute materially to the record and should be --
3 the objection should be upheld.

4 MR. PIRFO: I'm going to address that, Mr.
5 Chairman. The fact that Mr. Taylor did not rely on a
6 number of documents of course is well taken. Of course
7 he's not relied on a number of documents. But the fact
8 that NUREG 0948 is relevant and material, that's why his
9 reliance thereon is important to this proceeding. It
10 shows that he did his analysis without the benefit of
11 the hindsight of NUREG 0948 or the after-the-fact
12 assessment, whatever Mr. Sinkin cares to -- chooses to
13 characterize it as.

14 But the document remains relevant and material
15 as to whether the items reported or not reported in the
16 Quadrex report should have been reported to the NRC
17 under 50.55(e). Now, Mr. Sinkin can make these
18 arguments as to its weight later, but that's not an
19 argument for striking the document or not admitting the
20 document.

21 MR. GUTTERMAN: I have a little addition to
22 make to my argument, just to respond to what CCANP has
23 said.

24 CCANP is just flat wrong in saying that NUREG
25 0948 does not recognize the reportability of a breakdown

1 in the quality assurance program. I will refer the
2 Board to page 19 of NUREG 0948 where 50.55(e) is
3 described, outlined in detail and it says, "A breakdown
4 in the QA program under section 3.1.1.4(a)." Clearly it
5 does reference breakdowns in the QA program in
6 discussing reportability. The fact that it did not
7 include that there was a breakdown in the QA program
8 demonstrated by any of the Quadrex findings does not
9 prove that the Staff did not consider the possibility.
10 And I can't see how the argument that to the contrary or
11 the argument that the Staff did not consider it would
12 keep this document out in the face of admitted testimony
13 that says the Staff did consider that in its review, in
14 this review.

15 And it seems ironic to me that CCANP should
16 try to keep out of the record the fact that the Staff
17 thoroughly reviewed the Quadrex findings and concluded
18 that they were not reportable. That's just what this
19 hearing's about. The Staff reviewed exactly that
20 subject. And to try to keep out their review and
21 conclusions just seems bizarre to me.

22 MR. SINKIN: Well, that argument right there
23 clarifies precisely the point. We do not consider NUREG
24 0948 to have been a comprehensive review of 50.55(e).
25 If you read the conclusions of the Staff member who

1 wrote 0948 who is no longer with the NRC, Mr. Oberg,
2 it's clear that what he was looking at was were these
3 designs released for construction. It's abundantly
4 clear that that's what he was looking at. The fact that
5 he may have --

6 MR. PIRFO: So the record is clear, Mr. Oberg
7 did not write 0948. There was a number of people
8 involved in the writing of 08948. Mr. Oberg was head of
9 the task force, but Mr. Oberg did not write 0948.

10 MR. SINKIN: Whatever the authors of 0948.
11 It's abundantly clear that what they looked at was only
12 the criteria on release for construction and that they
13 made the determination on the reportability or
14 notifiability of Quadrex findings simply on the wrong
15 criteria.

16 And I think that's what the Board was calling
17 out in their February 26th order at page 9 when they
18 concluded that 0948 had not been based on an analysis of
19 50.55(e)(1)(i). And I think it's supportive of that
20 argument, Mr. Chairman, that the briefs submitted
21 subsequently by the NRC Staff argued precisely that
22 point, that it was 50.55(e)(1)(i), (e)(1)(ii), the
23 release for construction, that applied to the Quadrex
24 report and not (e)(1)(i); whereas, we argued in our
25 briefs that it was the quality assurance breakdown that

1 also applied. And the Board ruled in their order that
2 the NRC Staff position was simply wrong and that they
3 had tried to subsume the quality assurance breakdown
4 into the release for construction argument and it could
5 not be subsumed into that argument.

6 MR. PIRFO: I might point out to the Board
7 that page 12 of your May 17th order, at paragraph 5 at
8 the top of that page, points out that "As stated at the
9 prehearing conference, examination of the findings
10 listed by the Staff is not reportable based on a lack of
11 release for construction is to include only the seven
12 findings categorized by Quadrex as most serious." And
13 these were the findings that were based on that and
14 that's one of the reasons NUREG 0948 is relevant.

15 JUDGE BECHHOEFER: The Board thinks that the
16 document should be admitted and will be admitted.

17 We won't express any opinions as to the
18 weight. We do think that some of the determinations
19 were perhaps based on an incorrect application of the
20 criteria, but that will not preclude its admissibility.
21 It may affect its weight.

22 Staff Exhibit 136 will be admitted.

23 (Staff Exhibit No. 136 admitted in
24 evidence.)

25 MR. PIRFO: I note for the record that because

1 attached to Mr. Heishman's testimony was the guidance
2 FR, that is 137, NUREG 0948 is 136 just so it's clear.
3 The rest I'll be introducing sequentially.

4 Q (By Mr. Pirfo) Mr. Taylor, I show you a
5 document entitled Quality Assurance Requirements for the
6 Design of Nuclear Power Plants and I ask this document
7 be marked for identification as Staff Exhibit 138.

8 (Staff Exhibit No. 138 marked for
9 identification.)

10 Q (By Mr. Pirfo) Mr. Taylor, do you recognize
11 this document?

12 A (By Mr. Taylor) I do.

13 Q Is this document referred to in your testimony
14 as ANSI N45.2.11?

15 A It is.

16 Q Mr. Taylor, would you turn to page iii, the
17 forward?

18 A Uh-huh.

19 Q The page after that has Roman Numeral v. Do
20 you know where page iv is?

21 A I don't believe the standard as published
22 contains a page iv. It was apparently deleted for some
23 reason.

24 MR. PIRFO: The Staff would move the admission
25 of Staff Exhibit No. 138 into evidence.

1 MR. SINKIN: No objection.

2 JUDGE LAMB: Mr. Pirfo, immediately following
3 page vii, I have a blank page. Should that be blank?
4 There is small Roman Numeral vii.

5 MR. PIRFO: I know there was a blank page in
6 here, yes, sir.

7 MR. AXELRAD: There's no page little "A"
8 either?

9 MR. PIRFO: I didn't know about that.

10 MR. TAYLOR: May I explain?

11 MR. PIRFO: Mr. Taylor, what's the explanation
12 for this?

13 MR. TAYLOR: This is a Xeroxed copy of a
14 document that's printed on both sides of the page. And
15 fairly obviously, if it's done that way as the ANSI
16 standard is published, then if a clerk runs the thing
17 through the machine on double-side copying and a page is
18 blank, it's going to show in here as blank. That's just
19 exactly what's happened.

20 MR. PIRFO: Do you have the original of that?

21 MR. TAYLOR: I don't have it with me, no,
22 sir.

23 MR. AXELRAD: Russ?

24 MR. SINKIN: Have you got another one?

25 MR. GUTTERMAN: Somehow I happen to have a

1 copy of ANSI N45.2.11 with a page iv.

2 MR. TAYLOR: Is there one?

3 MR. GUTTERMAN: Yes.

4 JUDGE SHON: It appears there should be. The
5 list doesn't seem to terminate. It looks too short.

6 MR. GUTTERMAN: My copy's also missing page
7 viii, though. I'll supply copies of it at the break.

8 MR. PIRFO: I'll withdraw my motion for
9 admission of 138 until after the break and we're able to
10 supply complete copies.

11 Q (By Mr. Pirfo) Mr. Taylor, I show you what I
12 ask be marked for identification as Staff Exhibit 139
13 entitled U. S. Nuclear Regulatory Commission Regulatory
14 Guide.

15 (Staff Exhibit No. 139 marked for
16 identification.)

17 Q (By Mr. Pirfo) Do you recognize this
18 document?

19 A (By Mr. Taylor) Yes, I do.

20 Q And do you refer -- is this the document you
21 refer to in your direct testimony?

22 A Yes.

23 Q And this is an official publication of the
24 United States Nuclear Regulatory Commission?

25 A Yes.

1 MR. PIRFO: I'd ask now that Staff Exhibit 139
2 be admitted into evidence.

3 MR. SINKIN: No objection.

4 MR. GUTTERMAN: No objection.

5 JUDGE BECHHOEFER: Staff Exhibit 139 will be
6 admitted.

7 (Staff Exhibit No. 139 admitted in
8 evidence.)

9 Q (By Mr. Pirfo) Mr. Constable, Mr. Johnson, I
10 show you a document which I ask be marked Staff Exhibit
11 140.

12 (Staff Exhibit No. 140 marked for
13 identification.)

14 Q (By Mr. Pirfo) Would you identify this
15 document for me?

16 A (By Mr. Johnson) Yes, sir. This is a copy of
17 Region IV's investigation report 82-02 conducted at the
18 South Texas Project. It consists of the investigation
19 report itself and appended to it is Region IV's response
20 to corrections that were offered by HL&P, and that
21 attachment consists of the changes recommended printed
22 verbatim and our position at the end of that document.
23 The ones that were adopted as errata are contained in an
24 attachment.

25 Q So, after the publication of 82-02, which is

1 the first -- everything but the last five pages attached
2 to this, HL&P suggested changes and sent you under
3 covering letter of June 16th, 1982, the proposed
4 changes, some of which have been adopted, some of which
5 have not?

6 A Yes, sir, but their cover letter was June 9th,
7 1982.

8 Q But the letter back from -- I'm sorry, you're
9 correct.

10 A Yes.

11 Q Their letter was June 9th, our letter back to
12 them was June 16th, 1982.

13 A That's correct.

14 MR. PIRFO: I would ask that Staff Exhibit 140
15 be admitted into evidence.

16 MR. SINKIN: No objection.

17 MR. GUTTERMAN: No objection.

18 JUDGE BECHHOEFER: Staff Exhibit 140 will be
19 admitted.

20 (Staff Exhibit No. 140 admitted in
21 evidence.)

22 Q (By Mr. Pirfo) Mr. Johnson, I show you what I
23 ask be marked for identification Staff Exhibit 141.

24 (Staff Exhibit No. 141 marked for
25 identification.)

1 Q (By Mr. Pirfo) Could you identify that
2 document, please?

3 A (By Mr. Johnson) Yes, sir,. This document
4 consists of the notice of violation for the findings
5 that are contained in that inspection report 82-02. It
6 was sent under separate cover, but arises out of the
7 inspection report which is Staff Exhibit 140.

8 MR. PIRFO: I would ask that Staff Exhibit 141
9 be admitted into evidence.

10 MR. GUTTERMAN: No objection.

11 MR. SINKIN: No objection.

12 JUDGE BECHHOEFER: Staff Exhibit 141 will be
13 admitted.

14 (Staff Exhibit No. 141 admitted in
15 evidence.)

16 MR. PIRFO: Thank you, Mr. Chairman. At this
17 time we make the Staff panel available for
18 cross-examination.

19 JUDGE BECHHOEFER: Let's take our morning
20 break. Fifteen minutes.

21 (Brief recess taken.)

22 JUDGE BECHHOEFER: Back on the record.

23 MR. PIRFO: Mr. Chairman, if I may reopen my
24 direct examination for one moment and take care of Staff
25 Exhibit -- what's been identified as Staff Exhibit 138?

1 JUDGE BECHHOEFER: Right.

2 Q (By Mr. Pirfo) Mr. Taylor, I've placed in
3 front of you a page with Roman Numeral iv at the
4 bottom. Is this page part of Staff Exhibit 138, the
5 ANSI standards?

6 A (By Mr. Taylor) Yes.

7 Q Should that be included as page iv in Staff
8 Exhibit 138?

9 A For completeness, yes.

10 MR. PIRFO: Mr. Chairman, at this time I move
11 Staff Exhibit 138 into evidence with the insertion of
12 page iv.

13 MR. SINKIN: No objection.

14 JUDGE BECHHOEFER: Applicants?

15 MR. GUTTERMAN: No objection.

16 JUDGE BECHHOEFER: The Staff Exhibit 138 will
17 be admitted into evidence.

18 (Staff Exhibit No. 138 admitted in
19 evidence.)

20 MR. PIRFO: We have nothing further, Mr.
21 Chairman.

22 JUDGE BECHHOEFER: Mr. Sinkin?

23 MR. SINKIN: Thank you.

24 JUDGE BECHHOEFER: Mr. Sinkin, I note in terms
25 of your motion to strike that one of the items is now

1 moot.

2 MR. SINKIN: I did note that, Mr. Chairman. I
3 believe that's the item on page 10.

4 JUDGE BECHHOEFER: That's correct.

5 MR. PIRFO: Page 10 of Mr. Taylor's testimony?

6 MR. SINKIN: Yes.

7 Mr. Chairman, I'm in an embarrassing position
8 of somehow having failed to bring the motion to strike
9 with me. But I think the next one is on page 44.

10 JUDGE BECHHOEFER: You had one on page 5,
11 answer 13.

12 MR. SINKIN: Okay. Page 5, answer 13.

13 Actually, Mr. Chairman, in rereading page 5,
14 answer 13, we'll withdraw the motion on that one and go
15 to page 44, answer 133.

16 Actually, Mr. Chairman, the motion to strike
17 should have included the entire answer as opposed to
18 just that sentence beginning "it was subsequently." The
19 entire answer is a report of an evaluation by Bechtel --
20 wait a minute, no, I see what I'm doing. Yes, it's just
21 the sentence "it was subsequently withdrawn" that we
22 were moving to strike.

23 The Bechtel analysis led to a report being
24 filed as potentially reportable and then was later
25 withdrawn. We're moving to strike the part "it was

1 subsequently withdrawn" on the basis that the reason for
2 potential reportability was that the components as
3 viewed at the time would not properly perform under the
4 higher temperatures, the temperatures that were higher
5 than originally contemplated confirmed the Quadrex
6 finding that the temperatures were higher than
7 originally contemplated and that therefore there should
8 have been a notification.

9 The fact that the equipment was later
10 reanalyzed to see if it could withstand the higher
11 temperature and was found to withstand the higher
12 temperature is not relevant to whether there should have
13 been a potentially reportable finding initially notified
14 to the NRC. So, that was why we were moving to strike
15 answer 33, the sentence beginning "it was
16 subsequently."

17 MR. PIRFO: I think it's clear from the
18 context of the answer, Mr. Chairman, that this is
19 relevant. And if we can use another phrase Mr. Sinkin
20 himself has been fond of, the facts and circumstances
21 surrounding each thing, it would come under that low
22 threshold. And beyond that it shows that the ultimate
23 determination was -- the whole tenor of Mr. Taylor's
24 testimony is that he looked at it at the time as if he
25 were reviewing the Quadrex report when it was first

1 presented to HL&P.

2 And I think it's clearly relevant that this --
3 it was ultimately subsequently withdrawn. It may go to
4 weight, but it's clearly relevant and should not be
5 stricken.

6 MR. GUTTERMAN: I'll have to join in the
7 Staff's position on that. Obviously if it's relevant
8 that a later report was filed, then I'm sure the Board
9 recalls that when the Bechtel witnesses were testifying
10 they explained that what was reported in October of '82
11 was based on new facts not present in the Quadrex
12 report. So, based on what's already in the record, if
13 something is going to come in about the October '82
14 report, the full story ought to come in and not some
15 small part of it which would create a missimpression in
16 the record.

17 Obviously CCANP has a theory about how one
18 applies 50.55(e). I don't share that theory. If
19 something in my view was not reportable, then an
20 Applicant should not be criticized later for failing to
21 have reported that it was potentially reportable. My
22 interpretation of 50.55(e) is one that Applicants ought
23 to be allowed to argue and the record ought not be
24 restricted so as to preclude receiving evidence on that
25 other theory of what 50.55(e) means. And certainly this

1 fact is relevant to the context of the report that was
2 made in October '82.

3 MR. SINKIN: If -- well, I guess that we're
4 not looking for a ruling as a matter of law at this
5 point as to whether my theory of 50.55(e) is correct or
6 the Applicants' theory is correct. If the Applicants do
7 intend to argue that, I'm more than happy to have them
8 argue that.

9 We'll withdraw this motion to strike and let
10 it stay in.

11 MR. PIRFO: Does that apply to the other --

12 MR. SINKIN: I'm looking. The facts and
13 circumstances phrase originated with the Board rather
14 than with CCANP and --

15 MR. PIRFO: With all due respect to the Board,
16 I'm sure it originated someplace else, but --

17 MR. SINKIN: Okay, fine. I certainly did not
18 bring it up.

19 Well, it seems that the other examples are
20 similarly under this facts and circumstances kind of
21 argument. Rather than take our time with it, I'll just
22 withdraw the motions to strike.

23 JUDGE BECHHOEFER: For the last two items, I
24 take it?

25 MR. SINKIN: The last two items seem to be

1 facts and circumstances kinds of situations, so I won't
2 take time with those.

3

4

CROSS-EXAMINATION

5

BY MR. SINKIN:

6

Q Mr. Johnson, I guess we'll start with you.

7

Have you read the Quadrex report in its entirety?

8

A (By Mr. Johnson) It has been some time, but I

9

have.

10

Q Can you tell me when you read it in its

11

entirety?

12

A In the 1982 time frame.

13

Q When you express an opinion as to whether the

14

Quadrex report as a whole should have been turned over

15

to the NRC, you are limiting that opinion to whether it

16

should have been turned over pursuant to 50.55(e); is

17

that correct?

18

A Yes.

19

Q Mr. Constable, when did you first read the

20

Quadrex report?

21

A (By Mr. Constable) In June of this year.

22

Q June of this year?

23

A That's right.

24

Q And when you express an opinion as to whether

25

Quadrex should have been turned over to the NRC, you are

1 limiting your opinion as to whether it should have been
2 turned over pursuant to 50.55(e)?

3 A I expressed that when I talk about whether it
4 should be reported or not, we're talking about with
5 regard to 50.55(e), yes.

6 Q What I'm going to do, Mr. Johnson and Mr.
7 Constable, is ask both of you to essentially put
8 yourself in the place of Mr. Overstreet in 1981 who was
9 a quality assurance official for Houston Lighting &
10 Power. Mr. Overstreet was frequently the representative
11 on the Incident Review Committee.

12 Are you both familiar with the --

13 MR. PIRFO: I'll object to this hypothetical.
14 I'm not sure it's proper to have them put themselves in
15 the position of another person. If Mr. Sinkin wants to
16 pose a hypothetical, that's all right. But to ask them
17 to put themselves in the position of a particular
18 individual boarders on, I guess, speculation.

19 MR. SINKIN: All right. I'll do it
20 differently.

21 Q (By Mr. Sinkin) Let me ask you to put
22 yourself in a position of a managerial person in quality
23 assurance at Houston Lighting & Power May 1981. And I
24 will ask you to look at CCANP 125.

25 MR. PIRFO: They don't have 125, Mr. Sinkin.

1 I only have one copy.

2 Q (By Mr. Sinkin) I would particularly direct
3 your attention to the second page of that document, the
4 third paragraph. This document is in the record
5 identified as a Houston Lighting & Power quality
6 assurance audit that was conducted, reported on in
7 October of 1981. 1980, excuse me, October 1980.

8 MR. GUTTERMAN: As extracts from an audit.

9 MR. SINKIN: Excuse me?

10 MR. GUTTERMAN: I thought you said it was an
11 audit report. It's extracts from --

12 Q (By Mr. Sinkin) It's excerpts from the audit
13 report. The actual individual pages filled out by the
14 auditors are not part of that. What you see are the
15 summaries of the quality assurance staff as to what the
16 audit was about.

17 Have you had a chance to famaliarize yourself
18 with those pages?

19 A (By Mr. Constable) I'm not familiar with the
20 document, but I've read what you put before me.

21 Q I understand that. But today you have
22 familiarized yourself with those pages?

23 A (By Mr. Johnson) Yes, sir.

24 Q Okay. My question is as follows: Assuming
25 that you are a management person in quality assurance in

1 Houston Lighting & Power in May of 1981 and that you
2 have received from your auditors a report such as this
3 CCANP exhibit. And that in May of 1981 you received the
4 Quadrex report.

5 Putting the two together, would you consider
6 that you should make a 50.55(e) report to the Nuclear
7 Regulatory Commission that there's an engineering
8 breakdown at the South Texas Nuclear Project?

9 MR. PIRFO: I have to object to that
10 question. I realize it's a lengthy question, but the
11 witnesses have not reviewed the entire document, they've
12 only reviewed one paragraph of the document.

13 MR. SINKIN: I'm more than happy for them to
14 take the time, if necessary, to review the entire
15 document.

16 MR. PIRFO: Well, if questions are going to be
17 based on the entire document, they should be given the
18 opportunity to review the entire document.

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

20 MR. GUTTERMAN: While they're doing that I'd
21 like to get a clarification on one point.

22 Is part of the hypothetical that between
23 October of 1980 and May of 1981 no other information was
24 received? That all they have is some document that was
25 received back in October without the responses to it,

1 without subsequent audits? Is that the hypothetical?

2 MR. PIRFO: While you're thinking about that
3 clarification, I have another. By the entire document I
4 meant all the information contained in CCANP 125, not
5 the audit report. I mean just this --

6 MR. SINKIN: This document.

7 MR. PIRFO: You mean the second and third page
8 of CCANP 125?

9 MR. SINKIN: Well, now we're having them
10 review the entire document 125.

11 MR. PIRFO: Lanny, you keep saying "the
12 document?" Just tell me what you mean by "the
13 document."

14 MR. SINKIN: CCANP 125.

15 MR. PIRFO: The whole shooting match?

16 MR. SINKIN: We're now having them review the
17 entire contents of CCANP 125.

18 MR. PIRFO: Okay, fine.

19 MR. SINKIN: I thought that was the essence of
20 your objection.

21 MR. PIRFO: The essence, yes.

22 MR. GUTTERMAN: I'm sorry. You didn't say
23 this was the entire audit report, did you?

24 MR. SINKIN: No, I didn't.

25 MR. PIRFO: Mr. Sinkin, can the witnesses

1 confer without --

2 MR. SINKIN: Oh, certainly.

3 Q (By Mr. Sinkin) Have you finished your review
4 of the document?

5 A (By Mr. Johnson) Yes, sir, in the short time
6 permitted.

7 Q Okay. My question was in this hypothetical
8 situation you are a quality assurance manager at the
9 South Texas Nuclear Project. You've seen this report in
10 October of 1981.

11 MR. PIRFO: '80.

12 MR. SINKIN: October 1980, thank you.

13 Q (By Mr. Sinkin) Assuming for the moment
14 you've seen nothing else and the Quadrex report arrives
15 in May of 1981.

16 Let me set the hypothetical more precisely.

17 There have been no other audits by the quality
18 assurance department of Brown & Root's engineering
19 effort between October of 1980 and the arrival of the
20 Quadrex report in May of 1981. You look at this audit,
21 you look at the Quadrex report.

22 Do you as a quality assurance manager for the
23 construction permit holder make a notification to the
24 NRC regional office that there's a potential engineering
25 breakdown in Brown & Root pursuant to 50.55(e)?

1 MR. PIRFO: I have to object to this
2 question. The answer is not going to be probative of
3 anything.

4 This is such a hypothetical, it's speculation
5 on the parts of the witnesses. If the answer's an
6 unqualified yes, it doesn't help prove anything. If the
7 answer's an unqualified no, it doesn't prove anything in
8 this case. It's not probative.

9 MR. GUTTERMAN: I'll join in that.

10 We've taken one audit report that was done, I
11 don't know, six, seven months before the Quadrex report
12 was received. We don't know what came after that. We
13 don't know what the response to that was. It could be
14 that Brown & Root wrote back and said you're all wrong
15 about your findings and offered evidence that they were
16 wrong. It could be that Brown & Root promptly corrected
17 those things. We just don't know.

18 It could be these -- you know, I guess on the
19 face of it may be one can judge, I don't know if one
20 can, but perhaps one can judge the significance of
21 them. But we're just taking a couple of facts out of
22 context here and I can't see how that's probative of
23 anything at all.

24 JUDGE BECHHOEFER: I think we'll overrule the
25 objection.

1 Q (By Mr. Sinkin) Mr. Constable or Mr. Johnson,
2 whoever would like to go first. Mr. Johnson, why don't
3 you go first.

4 A (By Mr. Johnson) I'm going to couch these
5 remarks in terms of the 50.55(e) guidance of April 1980
6 which was in existence in the 1980-81 time frame, the
7 understanding that Region IV had of the application of
8 that guidance which was -- I believe which was within
9 the same realm as the way that guidance was being
10 applied throughout the other four regions, and as
11 understood and as what would have been wished to have
12 been applied by our headquarters.

13 If I -- in just scanning these 21 items, I
14 find things here that I would ask additional questions
15 about. And I'll talk about just this audit report, you
16 know, having seen this thing. I'd say that they're not
17 very exciting. There's one here that I'd certainly have
18 a lot more questions about, number 13, "Houston
19 coordinator not being notified of potentially reportable
20 deficiencies." I don't understand what that is. I'd
21 certainly ask some questions about that.

22 Client comments not resolved in required time
23 frame, request of reviewer responses not in proper time
24 frame, a supplier deviation request not dispositioned in
25 a timely manner, nonconformance report submitted to

1 supplier outside time frame. those are not very
2 substantive issues.

3 Now, having received the Quadrex report, this
4 might be a piece to add to it. And I'm not sure what
5 HL&P did with -- Mr. Goldberg I don't believe was at
6 HL&P when this was conducted. If someone handed this to
7 him, that might have been part of the reason he called
8 in Quadrex. I'm not going to put myself in his shoes,
9 that would be speculation.

10 (No hiatus.)

11

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1 Q Excuse me, one --

2 A (By Mr. Johnson) -- but --

3 Q I want to be sure my question is clear. Mr.
4 Goldberg, is not, in May of 1981, a manager of the
5 quality assurance department.

6 A No.

7 Q So my hypothetical I'm not even talking about --

8 A (By Mr. Johnson) So I'm putting myself in as
9 quality assurance --

10 Q Right.

11 A The Quadrex report is a report of engineering
12 conducted by Brown & Root, contains engineering findings;
13 it needs to be looked at from that design point of view
14 to determine whether it's reportable. So in think it's
15 speculation to -- I wasn't there. I'm not -- you know,
16 having looked at these and putting these in conjunction
17 with the kinds of things that I remember reading in the
18 Quadrex report itself would be total speculation to see
19 whether or not it should have been reported under
20 50.55(e) or not.

21 Q The purpose of a hypothetical is for you to try
22 and put yourself in the position of the hypothetical;
23 obviously, that to some extent is speculation because
24 you're in a hypothetical situation by definition.

25 A Uh-huh.

1 Q But the hypothetical situation is. You are a
2 quality assurance manager for a construction permit
3 holder; you have seen this audit in October of 1980 and
4 in May of 1981, this Quadrex report arrives, five hundred
5 pages long, three hundred deficiencies, or findings.
6 Does that trigger in your mind a notification to the NRC
7 under 50.55(e) that there's an engineering breakdown in
8 Brown & Root at South Texas nuclear project? That's the
9 hypothetical.

10 MR. PIRFO: I object, that was asked and
11 answered. Mr. Johnson has clearly stated he didn't have
12 enough to go on. He can't answer the hypothetical.

13 MR. SINKIN: Well, let me then follow up a
14 question.

15 Q (By Mr. Sinkin) Are you saying that because
16 the items in the audit that you looked at were matters of
17 timely response that therefore it's not relevant to
18 50.55(e)? Every item you identify was a matter of an
19 untimely response.

20 A Well, these descriptions of these items are
21 single sentences; I certainly couldn't make a judgment on
22 whether collect actively or individually they were
23 50.55(e) reportable items.

24 Q My question is more precise than that. The
25 ones you identified --

1 A Yeah.

2 Q -- all had a timeliness aspect to them. Is the
3 timeliness aspect something outside the scope of
4 50.55(e)?

5 MR. PIRFO: That question is too vague to be
6 answered, absolutely too vague.

7 Q (By Mr. Sinkin) Let me try and sharpen it up.
8 Is the timeliness of response to audit deficiency reports
9 a matter that could fall within the 50.55(e) notification
10 requirements?

11 MR. PIRFO: I'm not sure that's any less vague,
12 but --

13 MR. SINKIN: Let me try again.

14 MR. PIRFO: If the witness thinks he can answer
15 it --

16 Q (By Mr. Sinkin) If an A/E at a nuclear power
17 plant is not responding in a timely manner to audit
18 deficiency reports filed by the incorporate quality
19 assurance auditors of the construction permit holder, is
20 that a matter that could lead to a 50.55(e) report?

21 MR. GUTTERMAN: Does that have a basis in this
22 exhibit?

23 MR. SINKIN: The witness cited a series of ADR
24 findings that all dealt with the timeliness.

25 MR. GUTTERMAN: Timeliness but not timeliness

1 of response to ADR's.

2 MR. SINKIN: Timeliness of resolution of ADR's,
3 if that will help.

4 A (By Mr. Johnson) Let me take a shot at it.
5 You've asked a fairly is distinct question. First of
6 all, this would be an Appendix B, Criterion 17, failure
7 to take adequate and timely corrective action. Had the
8 NRC become aware that these deficiencies or audit
9 findings were not being responded to and management was
10 not taking action, and we're talking about say HL&P
11 management forcing Brown & Root to promptly answer and
12 correct these things in a manner that we thought was
13 adequate,

14 we would seek enforcement action against HL&P.
15 In the context of 50.55(e) reporting, you seem to suggest
16 that they would be using this almost as a way of
17 announcing this to us so that we could come and do
18 something against Brown & Root, and I don't think that's
19 what you really meant. But that's the way it kind of
20 came across;

21 But you've -- you haven't told me where the
22 deficiency is. It's certainly, in the vagueness of the
23 way you presented it, there could be something buried in
24 there that itself was a deficiency that they failed to, a
25 substantive deficiency that could lead to an impact on

1 safe operation of the plant down the road that could be
2 certainly 50.55(e) reportable.

3 But your question is much too vague to make the
4 kind of a statement that you want to draw out as a yes or
5 no. I just simply can't do it.

6 Q Let me try again.

7 If a construction permit holder, let's say
8 Houston Lighting & Power, discovers that Brown & Root is
9 not responding in a timely manner to audit deficiencies
10 found by Houston Lighting & Power auditors and that
11 there's a pattern of this over time, is there an
12 obligation on the part of Houston Lighting & Power to
13 file a 50.55(e) notification to the Nuclear Regulatory
14 Commission?

15 MR. GUTTERMAN: Objection on the grounds that I
16 don't think there's any basis in the record to show a
17 repetitive or a failure to respond to ADR's over time.

18 MR. SINKIN: I think that's precisely what that
19 audit shows and precisely what the findings cited by Mr.
20 Johnson showed.

21 MR. GUTTERMAN: Well, I haven't heard testimony
22 to that effect.

23 MR. SINKIN: We're dealing with a hypothetical,
24 we don't have to worry about what it shows.

25 MR. GUTTERMAN: I disagree with that, Mr.

1 Chairman. I don't think it serves the record at all to
2 pose hypotheticals that do not have a foundation of some
3 kind of evidence in the record to show that the Board
4 would have any reason to consider the significance of the
5 situation hypothesized.

6 MR. PIRFO: I may be heard on this, the NRC is
7 not concerned with the scheduling considerations; to that
8 extent, the context of 50.55(e) is misplaced there.

9 MR. SINKIN: Mr. Chairman, I don't believe that
10 the responsiveness or non-responsiveness in a timely
11 fashion to ADR's what is we mean normally when we use the
12 word "scheduling." We normally use the word "scheduling"
13 in terms of the progress of the project in construction
14 and engineering, whether that's being scheduled
15 appropriately. You certainly don't rule out the
16 responsiveness to ADR's in a timely fashion because it's
17 a scheduling matters or we wouldn't even have criterion
18 16 of Appendix B. As to the example that I'm using, the
19 witness seemed to indicate in his original answer by
20 picking out deficiencies in the audit report, that were
21 timeliness related.

22 MR. PIRFO: The staff withdraw the objection.

23 MR. GUTTERMAN: Mr. Chairman --

24 JUDGE BECHHOEFER: I think your description of
25 over a long period of time, I'm not sure that that is

1 shown by the document.

2 MR. GUTTERMAN: The other problem I have is
3 that CCANP is constantly referring to timeliness as if
4 timeliness shows that it was a timeliness of response to
5 an ADR. I see the word "timely" in here in a different
6 context than that. And I think there's a hypothetical
7 that, you know, if the witness has testified that he sees
8 evidence of failing to have timely responses to ADR's,
9 then I don't have that part of the objection. But I
10 haven't heard that.

11 MR. SINKIN: Let's look at paragraph 3 of Page
12 2, the last line. The line states, "In addition, review
13 of several previous audit deficiency reports issued to
14 B&R engineering during B&R 28, September 1979," one year
15 prior to this audit, is my remark about that, "indicates
16 that committed actions by Brown & Root never
17 materialized."

18 MR. GUTTERMAN: Mr. Chairman, what CCANP has
19 just read demonstrates that the circumstance that CCANP
20 has hypothesized is exactly what did not happen. That
21 sentence shows that Brown & Root did commit to actions in
22 response to those ADR's. That's not a failure to respond
23 to ADR's.

24 MR. SINKIN: I think in order to respond to
25 that objection, I changed it to resolve the resolution of

1 the ADR's so there's some question about whether they
2 actually said we will do something, we would eliminate
3 that question.

4 The resolution of the ADR's not in a timely
5 fashion.

6 MR. GUTTERMAN: Can I hear the question the way
7 it is now?

8 JUDGE BECHHOEFER: I'm not sure what it is.

9 Q (By Mr. Sinkin) Mr. Johnson, if Houston
10 Lighting & Power finds that their architect engineer is
11 not resolving audit deficiency reports in a timely
12 fashion, is that a matter that is subject to notification
13 to the Nuclear Regulatory Commission under 50.55(e)?

14 A (By Mr. Johnson) Is there no objections or --
15 I mean, I'm ready to go.

16 JUDGE BECHHOEFER: Yes. I guess so.

17 MR. GUTTERMAN: If he can answer it.

18 A (By Mr. Johnson) The answer to that very
19 straightforward question is an un unequivocal no, it was
20 not required to be reported under 50.55(e), unless there
21 is a deficiency that results from that which meets the
22 reporting criteria. In and of itself timeliness is not
23 an issue that needs to be reported under 50.55(e).
24 Certainly a management issue that I would expect the
25 utility to resolve. And as I said before, may led to

1 enforcement. But not under 50.55(e).

2 Q Mr. Constable, I don't believe you've had an
3 opportunity to respond to this question. The question is
4 if you had before you as a quality assurance manager for
5 a construction permit holder the audit that's identified
6 as CCANP 125, and then you received the Quadrex report,
7 whether you would feel you should notify the Nuclear
8 Regulatory Commission of a potential breakdown in Brown &
9 Root's engineering program, pursuant to 50.55(e)?

10 A (By Mr. Constable) My answer is the same as
11 Mr. Johnson's, no. I don't see a deficiency here; this
12 looks like a fairly routine audit identifying fairly
13 routine problems. I don't see in my mind a deficiency
14 here. I should add deficiency as described by
15 N-50.55(e), so we make that clear.

16 Q Would either of you consider an inability to
17 perform a given safety related engineering analysis on
18 the part of the architect engineer, the architect
19 engineer is unable to perform a given safety related
20 analysis, is that a deficiency under 50.55(e)?

21 A (By Mr. Johnson) No.

22 A (By Mr. Constable) I don't see how to make a
23 connection again with what a deficiency is described as.
24 If the person can't do it, the job doesn't even proceed.

25 Q If a quality control inspector is hired to do

1 quality control inspections and is unqualified to perform
2 those tasks but has not yet performed a task, do we have
3 a deficiency?

4 MR. PIRFO: Under 50.55(e)?

5 Q Under 50.55(e). Let's say you look at -- well,
6 make it a little more significant. You look at quality
7 control inspectors working on the project; none of them
8 have any training that qualifies them to be quality
9 control inspectors, they've been hired today; you walk in
10 today after they've been hired, you look at their files,
11 no qualifications; they haven't gone to the field yet,
12 haven't looked at a thing, do we have a deficiency under
13 50.55(e)?

14 MR. GUTTERMAN: Can I get a clarification of
15 the question? Is the supposition that these people have
16 been certified to perform the safety related --

17 Q (By Mr. Sinkin) They're at the point where
18 they're ready to go out the door and to go the field and
19 make inspections, or HL&P or Brown & Root whoever is
20 hiring, is going to do no more investigation of their
21 qualifications.

22 Okay, here's your hardhat, go to the field; you
23 walk out the door, you meet them; never seen them before,
24 you go and check their files, you find they have no
25 qualifications, they were on their way to the field when

1 you met them, they haven't looked at a thing, do we have
2 a deficiency under 50.55(e)?

3 MR. GUTTERMAN: I object to the question on the
4 grounds it's not relevant to the engineering issues that
5 we're dealing with in this issue.

6 MR. PIRFO: Mr. Chairman, this is bordering on
7 some metaphysical discussion of when does the deficiency
8 arise. It's a philosophy class in philosophy 101 in
9 college; I don't understand. When does the deficiency --
10 when does the tree drop in the forest, if you've got a
11 possibly deficiency, you catch them on the way out the
12 door, they haven't made to the field yet, I think is
13 absurd. I don't understand.

14 MR. SINKIN: We're trying very clearly to
15 highlight how the witnesses use the word "deficiency" in
16 50.55(e). They're saying it's not a deficiency unless
17 certain criterior are met. I'm trying to find out when a
18 deficiency is met as being a deficiency in their eyes.

19 MR. GUTTERMAN: I'm trying to point out, Mr.
20 Chairman, we've had pretty clear evidence in the record
21 if you look at the Phase I and Phase II record, that the
22 quality assurance requirements applicable to quality
23 control inspectors provide specific details about how one
24 certifies them to perform quality control inspections on
25 the job.

1 The way engineering organizations assign
2 engineers to do their jobs is different, ANSI N-45 2.6 I
3 think it is, doesn't apply to design engineers. The
4 hypothetical of a quality control inspector is just
5 different; it's not something that's really analogous to
6 these design engineers that we're talking about in the
7 Quadrex reported.

8 MR. PIRFO: I might add, Mr. Chairman, we do
9 have specific findings and specific facts which are in
10 issue in this case, of i.e., the findings of the Quadrex
11 report, be they discipline findings or generic findings
12 and to attempt to -- that's what we should be talking
13 about, not attempting to tie it to a whole bunch of
14 hypotheticals. There's specific findings issue, the
15 testimony in this case goes to whether these specific
16 findings were reportable and whether this reflects on
17 HL&P's character and competence. Mr. Taylor has prepared
18 testimony in view of those findings; Mr. Johnson and Mr.
19 Constable have reviewed that testimony as well as given
20 the background of 50.55(e). But I don't think there's
21 anything in the direct testimony that states, you know,
22 when does a -- well, I'll leave it at that, I see it
23 outside the scope of direct and I see it totally
24 irrelevant.

25 MR. SINKIN: Mr. Chairman, I think this is

1 almost in the nature of voir dire, that we are testing
2 these witnesses' application of 50.55(e); how they
3 understand the term "deficiency" and other terms in that
4 regulation. And that's directly relevant to the opinions
5 they render as to whether the Quadrex report or any of
6 its findings should have been turned over to the Nuclear
7 Regulatory Commission pursuant to that regulation. We
8 determined in the initial questioning that their opinion
9 on turning over the report was strictly in terms of
10 50.55(e). I am now exploring how they understand
11 50.55(e).

12 MR. PIRFO: I don't see what hanging the
13 appellation of voir dire on this make it more relevant.
14 Is that -- a magic word somehow? If it's not relevant,
15 it's not relevant. You can call it what you will, but it
16 doesn't make it relevant.

17 MR. SINKIN: If the understanding of these
18 witnesses of 50.55(e) is irrelevant to this case then
19 their testimony is irrelevant to this case.

20 MR. PIRFO: That's not what I said. I said the
21 questions are irrelevant, the understand of 50.55(e) is
22 of course relevant to this case, that's why they're here.
23 My objection is to the questions, not their understanding
24 of 50.55(e).

25 MR. SINKIN: I'm testing their understanding

1 using hypotheticals.

2 MR. PIRFO: The test is what's wrong. The
3 specific test is what is --

4 JUDGE BECHHOEFER: We're going to sustain the
5 latter objection, only because the example you gave is
6 not relevant to their understanding of 50.55(e) as it
7 applies to the Quadrex report.

8 JUDGE SHON: Right.

9 JUDGE BECHHOEFER: The QC inspectors have
10 different standards and qualifications. So -- and the
11 requirements governing them are different. So when you
12 get a deficiency in that, it has no bearing at all as to
13 whether or not there's a deficiency in the other areas of --

14 JUDGE SHON: Mr. Sinkin, you know, 50.55(e)(1),
15 specifically seems to me to apply, word for word, to each
16 deficiency found in design and construction. An
17 unqualified inspector isn't a deficiency in design and
18 construction, or certainly doesn't seem to be. And what
19 their in understanding of that would be wouldn't bear on
20 their ability to enforce or interpret 50.55(e).

21 JUDGE BECHHOEFER: Unqualified personnel but
22 not inspectors.

23 JUDGE SHON: Yeah.

24 JUDGE BECHHOEFER: Not QC inspectors. It would
25 be possibly unqualified personnel, which are mentioned in

1 the Quadrex report, but not unqualified CYC inspectors
2 which are not.

3 MR. SINKIN: I understand they're not mentioned
4 in the Quadrex report, Mr. Chairman. I understand the
5 Quadrex record is not dealing with quality control
6 inspectors. But the answer given by the witnesses seem
7 to indicate that they would have to actually find an act
8 performed in order to find a deficiency. And I was
9 trying to clarify that the qualifications of the
10 personnel performing the act could in fact be deficient
11 whether than act had been performed or not. And I
12 thought the the QC example would illustrate that most
13 clearly.

14 JUDGE BECHHOEFER: I don't think it will, with
15 respect to the kind of qualifications you're talking
16 about here. We're not ruling out the qualifications of
17 the particular people.

18 MR. SINKIN: Fine.

19 Mr. Chairman, then I think that this would be a
20 good point to break for lunch.

21 MR. PIRFO: Mr. Chairman, we've only going a
22 little over a half hour.

23 MR. SINKIN: It's not my fault.

24 MR. PIRFO: I'm not saying it's your fault.
25 I'm just making an observation.

1 MR. SINKIN: I realize we've only gone a half
2 hour with these witnesses, but everyone else has been
3 going since 9:00 o'clock this morning.

4 MR. PIRFO: The staff -- that should not be
5 construed as an objection to having lunch now. I just
6 wanted for the witnesses' purposes to get a little more
7 time under their belt before they face a long afternoon.

8 JUDGE SHON: I guess we will break, it's a
9 little early; but an hour an fifteen minutes or so.

10 (Luncheon recess.)

11 (No hiatus.)

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1 JUDGE BECHHOEFER: On the record. At this
2 point, we thought we would hear arguments on the
3 requested, the subpoenas that were requested this
4 morning. And I guess we had asked at least with respect
5 to one of the witnesses, we had asked for some
6 specification of matters; that's Mr. Thrash. Anyway,
7 we'll -- let's do the two people separately, but Mr.
8 Sinkin, do you have -- further description?

9 MR. AXELRAD: Mr. Chairman --

10 MR. SINKIN: Sure.

11 MR. AXELRAD: With respect to the subpoena of
12 Mr. Thrash, in accordance with the Board's request, Mr.
13 Sinkin has indicated to us the specific notes of Mr.
14 Thrash that he thinks that he should be subpoenaed for
15 and those are Mr. Thrash's notes for meeting of April
16 27th, for the meeting of June 26th, for the meeting of
17 July 23, and for the meeting of July 24th, one of which
18 meetings has sometimes been referred to as the meeting of
19 July 27th.

20 Since Mr. Sinkin gave us that information, we
21 have been trying to go through the record to ascertain
22 what the status is of each of those notes of Mr. Thrash
23 insofar as the record of this proceeding is concerned.
24 And we just did not have enough time during the lunch
25 hour to finish that.

1 I believe that the notes of Mr. Thrash of April
2 27th and June 26th have already been admitted in the
3 record for some limited purpose. I have not so far been
4 able to find any reference to Mr. Thrash's notes of any
5 meeting in July as having been discussed in this hearing
6 so far. And before I would make any definitive statement
7 to the Board in this respect, I would like to have the
8 opportunity to go back through the record and make sure
9 that whatever statements I make are fully accurate.

10 So what I'm saying is I'm not sure that I'm
11 prepared at this point to go ahead with the argument with
12 respect to Mr. Thrash's notes.

13 MR. SINKIN: Mr. Chairman, I can appreciate
14 that. And we can certainly wait until after the next
15 break. I will just say that it became obvious that the
16 minutes dated 7-27-81 were actually 7-23-81 because they
17 were indeed being discussed in the middle of the hearing
18 so I'm completely sure the record will reflect those
19 minutes have been discussed and questions have been asked
20 about them.

21 MR. AXELRAD: Right. But the question is not
22 with respect to the minutes. I believe the minutes
23 themselves are --

24 MR. SINKIN: No, I'm saying the notes. I
25 didn't mean minutes. I meant the notes of that date were

1 the ones that had the wrong date on the top.

2 MR. AXELRAD: I think the ones that had the
3 wrong date are the minutes and not the notes, and those
4 are in. So I don't think the notes have ever come up and
5 I'm not sure what it is we're going to be arguing about
6 until I go back over the record.

7 JUDGE BECHHOEFER: I might say the Board will
8 confirm that you're recollection of the notes of April 27
9 and June 26 were admitted at least for a limited purposes
10 as Applicants' Exhibit 59 and CCANP Exhibit 112, which is
11 duplicate in part by Applicants' Exhibit 70. And those
12 were admitted to some extent.

13 MR. AXELRAD: That's part of my confusion. We
14 have two notes which have already been admitted for some
15 purpose, and we have two notes which have never even been
16 mentioned and I'm not sure what it is we're going to be
17 arguing about. Before I say anything further, I want to
18 check the rest of the record.

19 Now, Mr. Sinkin would like to enlighten us as
20 to what else we're going to be arguing about so that we
21 can prepare the --

22 MR. SINKIN: If Mr. Thrash were coming we would
23 fully intend to introduce through Mr. Thrash all of his
24 notes through that meeting.

25 MR. AXELRAD: That's additional discovery. I

1 don't --

2 MR. SINKIN: It's not additional discovery, the
3 notes are produced already.

4 MR. AXELRAD: Mr. Sinkin started off, I
5 thought, with a statement that he wanted to have a
6 subpoena with respect to materials which are already in
7 the record in some fashion. I did not get any indication
8 from his previous mention that he intended to subpoena
9 Mr. Thrash to discuss materials which have not been in
10 this regard in any fashion.

11 By in the record, I was trying to give a broad
12 definition to include something that was even discussed
13 at the hearing so far. But if the notes of Mr. Thrash
14 have not been discussed so far, I fail to see how it can
15 possibly be any basis for subpoenaeing this --

16 MR. SINKIN: The reason for the request of Mr.
17 Thrash's subpoena is that Mr. Thrash's whole methodology
18 for taking notes has been called into question by various
19 witnesses. That was the purpose of the subpoena. So
20 going through the notes that we have available from what
21 he's saying, will be the line of inquiry as to how he
22 took those notes and what they represent.

23 MR. REIS: If the Staff can be heard, Mr.
24 Thrash's methodology for taking notes or the validity is
25 so collateral to this proceeding that certainly the

1 request for subpoena can be denied out of hand on that.

2 Further, the material was available before
3 witnesses were identified and they were not identified.
4 And no matter what the right is to subpoena people, they
5 had to identify the witnesses ahead of time and they
6 didn't do it. That basis alone, there's a basis now,
7 although not to grant, but to deny, to rule to deny the
8 motion right offhand right now.

9 MR. SINKIN: I think to the contrary, Mr.
10 Chairman. It's very similar to the situation we had with
11 Dr. Broom, where a witness was presented with a document
12 that clearly documented an event he had participated in
13 and had a totally blank mind about it, couldn't remember
14 it, so we went for another witness who would have a
15 memory. The minutes were brought to the attention of
16 various HL&P witnesses who actually participated in those
17 meetings, and they either couldn't remember what went on
18 that the items related to or remembered them very
19 differently from what Mr. Thrash has recorded.

20 MR. REIS: This is --

21 MR. SINKIN: Excuse me. So Mr. Thrash's
22 recollection of what was actually recorded is obviously
23 relevant and material to this record.

24 MR. AXELRAD: Mr. Chairman, if I might just
25 respond very briefly to that. The situation with respect

1 to Dr. Broom's memorandum, whatever it may have been, is
2 certainly no precedent or analogy for this current
3 situation. In order to eliminate the additional problems
4 in delay and all that, we agreed to have those -- that
5 memorandum considered to be authentic and we'd argue
6 about materiality and that was the way that was handled
7 and that has not precedential value for this particular
8 situation.

9 What we have here are minutes of notes by Mr.
10 Thrash, various meetings, that were attend by perhaps a
11 dozen people, three or four of those people have already
12 testified in this proceeding, three of them were
13 questioned about some of those notices; the fourth could
14 have been if Mr. Sinkin chose to do so and to bring in a
15 fifth individual whose memory or recollection of that
16 particular event would be of no additional value than the
17 two or three people we already have is certainly not of
18 probative value.

19 And as Mr. Reis has pointed out, we do believe
20 that the subpoena could be denied on the basis of the
21 present information, although if the Board does not deny
22 on that basis then we would appreciate additional time to
23 review the status of the record and what was said and
24 present additional argument.

25 MR. SINKIN: Just one brief response to that,

1 Mr. Chairman. We're partially in this situation because
2 when CCANP asked for a hearing on the handling of the
3 Quadrex report immediately in early 1982, part of the
4 reason given was that memos would fade and testimony
5 might be difficult.

6 That indeed has turned out to be the case. In
7 1985, witnesses presented with notes from a meeting they
8 attended have no memory or have a different memory of
9 what the notes reflects actually happened. We think that
10 Mr. Thrash's notes as the only apparently contemporaneous
11 record of what went on in the meeting taken by a
12 participant in the meeting are now obviously the best
13 evidence of what was said in that meeting.

14 MR. REIS: Mr. Chairman, I'm afraid that after
15 Mr. Thrash, we get Mr. Thrash to testify, we're going to
16 get a request, again, for other people and more people if
17 we don't like the story we get from Mr. Thrash, we'll get
18 somebody else to testify and then somebody else called
19 and we'll eventually get everyone who was at the meeting
20 or who might have talked to anyone who was at the
21 meeting. And this can go on forever.

22 MR. SINKIN: That's meaningless speculation.

23 MR. REIS: He had the opportunity to set forth
24 this witnesses at the beginning and it wasn't done and
25 that's the end of it.

1 MR. AXELRAD: Could we help the Board if the
2 Board is looking for something.

3 JUDGE BECHHOEFER: I'm looking for the document
4 with the wrong date on it.

5 MR. AXELRAD: July 27th.

6 JUDGE BECHHOEFER: Yes.

7 MR. AXELRAD: Okay. That was produced, I
8 believe, on April 26th, 1985, Document No. 1 produced at
9 that time where Mr. Thrash's notes of that date. Would
10 you like to have our copy and document No. 2 where the
11 excerpts and drafts of the -- I guess that was the only
12 one.

13 I believe I was incorrect in what I said
14 before, those are excerpts of the notes of the meeting
15 not the minutes of the meeting.

16 JUDGE SHON: The minutes of the meeting are
17 properly dated, they were dated the --

18 MR. AXELRAD: That's correct.

19 JUDGE BECHHOEFER: I found it now.

20 The Board has discussed this matter and we
21 think the subpoena for Mr. Thrash should be granted. We
22 will listen to further arguments in the nature of a
23 motion for reconsideration later on. Our present
24 inclination is to grant a subpoena to Mr. Thrash to
25 testify as to clarification and to the extent necessary,

1 authentication of notes of meetings of the STP mangement
2 committee on April 27, 1981; that's Applicants' Exhibit
3 59, June 26th, 1981, that's CCANP Exhibit 112, and July
4 23 and 24, 1981.

5 There's no exhibit there because I don't think
6 it's been either offered and certainly has not been
7 accepted.

8 And the relationship of those notes to the
9 minutes of the meetings in question, CCANP Exhibits 110,
10 111 and 113. That would be the scope of the subpoena we
11 would -- we think should be issued.

12 We will entertain further arguments for
13 reconsideration, if the parties wish to do that. We
14 think the ambiguity -- there are system ambiguities in
15 the testimony with respect to those particular meetings,
16 and we think the record would be cleared up if Mr. Thrash --
17 or might well be cleared up if Mr. Thrash were to testify
18 as to those -- those meetings only.

19 And we are not asking Mr. Thrash, we do not
20 think Mr. Thrash need produce any further documents. We
21 are limiting it to the documents that we've already
22 discussed in the hearing; there is some clarification we
23 think is necessary.

24 Again, if the Applicants in particular have
25 further material that they wish us to bring to our

1 attention, we will listen to it by way of a motion for
2 reconsideration. But we thought we ought to let you know
3 what our present feeling is so that you can gauge your
4 actions accordingly. Now, we do not know, we don't have
5 any idea what date we should put on the subpoena. It
6 would depend on Mr. Thrash's availability in part.

7 MR. SINKIN: I would be happy to work it out
8 with the Applicants.

9 (No Hiatus.)
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1 MR. SINKIN: I would be happy to work out with
2 the Applicants a time convenient to Mr. Thrash, if they
3 want to do that, or we will just set a time and serve it
4 for that --

5 JUDGE BECHHOEFER: We generally would like
6 sometime next week.

7 MR. SINKIN: Sometime next week. We'll work
8 that out. We'll try and work out a time that's
9 convenient for him and no later than early next week
10 since it's quite possible we'll get finished early next
11 week.

12 JUDGE BECHHOEFER: Right.

13 Well, perhaps the Staff at this time has some
14 further word on the panel that's coming tomorrow?

15 MR. REIS: I have telephone calls being made
16 right now to advise you of that and Mr. Phillips'
17 availability. I thought Mr. Claude Johnson was
18 available and he probably is, but we're not absolutely
19 positive, so I want to factor that in, too.

20 JUDGE BECHHOEFER: Yes. If it were
21 preferable, we wouldn't object to hearing Mr. Thrash
22 tomorrow. But --

23 MR. AXELRAD: Mr. Thrash is not in Houston.
24 There is no way you're going to hear him tomorrow.

25 MR. SINKIN: Well, that settled that.

1 MR. REIS: Where is Mr. Thrash?

2 MR. AXELRAD: Either Hawaii or Denver.

3 MR. PIRFO: Let's go to Hawaii.

4 MR. REIS: Does Mr. Thrash work for the
5 Applicants or any of the Applicants anymore?

6 MR. GUTTERMAN: No.

7 MR. REIS: He has to serve a subpoena to Mr.
8 Thrash in Hawaii or Denver in the next couple of days
9 and pay his way here.

10 MR. SINKIN: Do you know when Mr. Thrash is
11 scheduled to return, Mr. Axelrad?

12 *MR. AXELRAD: Further deponents sayeth not. I
13 don't know.

14 MR. SINKIN: Thank you for your cooperation.

15 MR. AXELRAD: I am just telling you I don't
16 know, Mr. Sinkin. It's not a matter of cooperating or
17 not cooperating.

18 MR. SINKIN: Hawaii or Denver, okay. We'll
19 work on it.

20 JUDGE BECHHOEFER: Well, perhaps by the time
21 we actually issue a subpoena, you can find that out.

22 MR. SINKIN: Right.

23 MR. AXELRAD: Does that take us to Mr. Ulrey?

24 JUDGE BECHHOEFER: Yes. Do the Applicants
25 have a statement on Mr. Ulrey?

1 MR. AXELRAD: I assumed that Mr. Sinkin was
2 first going to explain why he is subpoenaing or seeking
3 to subpoena Mr. Ulrey.

4 JUDGE BECHHOEFER: Right.

5 Well, do you have anything to add to what you
6 said this morning?

7 MR. SINKIN: Not to add to what I said this
8 morning, no.

9 JUDGE BECHHOEFER: You can wait one minute.

10 We don't think you need to make a statement on
11 this one. We have decided to deny this one completely
12 and I don't think you have to tell us why. We do not
13 think the statement made in support of that, while it
14 may be generally relevant, we don't think at this stage
15 of the proceeding Mr. Ulrey's presence is needed or
16 necessary to clarify the record in any way. So --

17 MR. SINKIN: I want to be sure -- then I'll
18 move to reconsider at this point, Mr. Chairman.

19 We weren't saying Mr. Ulrey was necessarily
20 needed to clarify the record. Since the beginning of
21 the proceeding, long before the beginning of the
22 proceeding the information from the Applicants was
23 always that it was a three-person review team that made
24 the determinations on what was notifiable and that was
25 the extent of the review. And from Mr. Frazar's

1 testimony it appears that at the time Quadrex was
2 delivered, Mr. Ulrey in the quality assurance department
3 was given a copy. He at least used that copy according
4 to Mr. Frazar as a guide to what he should audit for.

5 The reason for calling Mr. Ulrey would be to
6 determine if, in fact, he too made determinations on
7 what was reportable or not reportable pursuant to
8 50.55(e) from the Quadrex report or whether that was not
9 a function the quality assurance department was asked to
10 perform.

11 JUDGE BECHHOEFER: The Board will not grant
12 that subpoena. We think the circumstance that the QA
13 department may or may not have used the Quadrex report
14 in certain ways is not really material to our
15 determination of whether it should have been turned over
16 to the NRC. We've heard plenty of testimony as to the
17 rationale why it wasn't turned over. I don't think that
18 Mr. Ulrey's testimony is necessary in that regard,
19 particularly at this late date. So, we will deny that
20 subpoena.

21 I guess at this point you may proceed with
22 cross-examination of the Staff panel.

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

24 Q (By Mr. Sinkin) Mr. Johnson, in your view
25 does criterion 7 of Appendix B apply to Houston Lighting

1 & Power? That's the -- you may want to review the
2 criterion. It's the one about the control of purchased
3 services.

4 Let me distinguish that just to be sure my
5 question is clear to you. Whether criterion 7, the
6 control of purchased services, would apply to the
7 relationship of HL&P to its architect engineer as
8 distinguished from the architect engineer getting
9 services from other vendors. Does criterion 7 apply to
10 the relationship between HL&P and its architect
11 engineer?

12 MR. PIRFO: I think the question calls for a
13 legal opinion by the witness. I mean, we'll concede
14 that the criterion to the extent it applies applies to
15 all nuclear -- I guess I'm not --

16 MR. SINKIN: If you want to testify for the
17 witness, that's one thing.

18 Q (By Mr. Sinkin) I guess maybe my question
19 would be better phrased when you apply 50.55(e) to
20 determine whether there's a violation, when you're
21 applying criterion 7, do you look at the construction
22 permit holder as well as the contractors to the
23 construction permit holder?

24 MR. SINKIN: Maybe that's a better question.

25 MR. PIRFO: I don't have an objection to it,

1 so to that extent --

2 MR. GUTTERMAN: I'm not sure I understand the
3 question anymore.

4 JUDGE BECHHOEFER: Do you understand what
5 they're asking?

6 A (By Mr. Johnson) I'd like you to restate it.

7 Q (By Mr. Sinkin) Okay. Criterion 7 deals with
8 measures being established to control purchased
9 services. Can we agree on that?

10 A Yes, sir.

11 Q You have to say something for her.

12 A Yes.

13 Q Okay. Does that criteria as you apply it
14 through your enforcement of 50.55(e) apply to Houston
15 Lighting & Power's purchase of services from its
16 architect engineer?

17 A I understand that.

18 No. Traditionally criterion 7 applies to
19 those limited services that are purchased by the utility
20 or its principal contractor the AE and the constructor.
21 The AE, the constructor and the utility become bound
22 essentially as one agent. And the more appropriate
23 criteria in the design area would be criterion 3 in the
24 area of quality assurance than criterion 2 maybe.

25 Q Now, in your answer you said criterion 7

1 applies to the utility and its contractor and then you
2 said no, it doesn't apply to HL&P. Now, the utility is
3 HL&P, so you're going to have to explain that to me.

4 The question was whether it applies to HL&P
5 purchasing services from its architect engineer and your
6 answer had said, you said it applies to the utility and
7 the architect engineer, but it doesn't apply to HL&P
8 purchasing services. Maybe you can clarify that for me.

9 A I think you've misunderstood me then.

10 Q I must have.

11 A It applies as part of the quality assurance
12 program for purchasing as the Staff has applied that
13 criteria for purchasing of, say, a piece of equipment, a
14 singular piece of equipment for going out and
15 contracting for someone to come in and do some limited
16 work. But not in the context of the arrangement that's
17 entered into for the construction of the plant between
18 the architect engineer, the constructor and the
19 utility. They essentially become bound as one agent and
20 quite often we find ourselves seeking enforcement
21 against the utility for a failure quite outside the
22 direct control of the utility that was caused by the --
23 one of those other people. But we see them all as one
24 entity and therefore we apply -- we would apply
25 criterion 7 to them then going out and purchasing

1 something in a limited sense from another supplier.

2 Q So, in your view, if there were a breakdown in
3 Brown & Root's design and engineering process in 1981,
4 that would not be in your view a criterion 7 violation
5 cited against HL&P for permitting that breakdown in the
6 services purchased from Brown & Root as architect
7 engineer; is that correct?

8 A No, I think the appropriate criterion then
9 would be straight to criterion 3, design control.

10 Q Mr. Taylor, do you agree with that
11 interpretation of criterion 7?

12 A (By Mr. Taylor) Yes, I do.

13 Q Mr. Constable?

14 A (By Mr. Constable) I think the question's
15 kind of vague. But in general -- I agree with him, but
16 the criterion applies to, you know, the utility and
17 their constructors as a whole.

18 Q Mr. Taylor, turning in your testimony to page
19 4, answer 10. I should back up, question 10, answer
20 10. You were being asked in that question to evaluate a
21 particular generic finding of the Quadrex report. And
22 in doing so, you turned to ANSI N45.2.11 which has been
23 introduced as Staff Exhibit 138.

24 What I want to clarify with you, if we can, is
25 the relationship between ANSI N45.2.11 and 50.55(e).

1 Let me ask a few questions and see if we can get there.

2 Would I be correct that in the initial
3 relationship between the NRC and a construction permit
4 holder, the NRC does not require the construction permit
5 holder to implement ANSI N45.2 standards; is that
6 correct?

7 A (By Mr. Taylor) Correct. That is correct.

8 Q But if the construction permit holder decides
9 to conduct their activities pursuant to ANSI N45.2 and
10 commits to doing so, makes that commitment to the NRC,
11 then the NRC will enforce ANSI N45.2 in their inspection
12 and enforcement operation; is that correct?

13 A Yes, but not quite so directly.

14 Q All right. Where is the disconnect, as it
15 were?

16 A The N45.2 standards and their daughters,
17 daughter standards, are an interpretative vehicle of
18 Appendix B as used by the Commission Staff. So,
19 therefore, if we found something that was being done not
20 in accordance with one of the daughter standards, we'd
21 carry that back to the parent document which is Appendix
22 B. That would be then a violation.

23 A (By Mr. Johnson) Let me add something to
24 that, if you don't mind.

25 In failure to implement some particular

1 commitment in ANSI N45.2.11, if it did not lead in our
2 view to a failure to implement the requirements of the
3 regulations, the larger requirements of Appendix B would
4 then be carried not as a violation, it would be carried
5 as strictly a deviation to a commitment. You have said
6 you're going to do something this way, you didn't do it
7 in that particular way, you did it this alternate way.
8 What are you going to do to either change what you said
9 you were going to do or do it in accordance with what
10 you said you were going to do. And that is what is
11 known as a deviation in the enforcement arena.

12 A (By Mr. Heishman) May I add something --

13 Q Certainly.

14 A -- to that? I want to make sure that the
15 record is clear that the Commission requires that
16 Appendix B be met. We allow permit holders to determine
17 how they want to meet those requirements and regulatory
18 guides which endorse ANSI standards that we're talking
19 about are one method which we find on a generic basis is
20 a way to do that. And if licensees or permit holders
21 say that's the way they want to meet that regulation, we
22 then look at that as, as Mr. Johnson described, a
23 commitment as to how they are going to meet it.

24 But it also can be looked at and is quite
25 frequently looked at, as Mr. Taylor described, as being

1 you did not meet Appendix B the way you said you were
2 going to and so it can also be a violation. And there's
3 some judgment involved about whether it's a deviation or
4 whether it's a violation. The end result, however,
5 except for enforcement is the same. And that is the
6 Commission expects that whoever gets a license and
7 describes how he's going to meet the conditions of that
8 license will do so. And if he doesn't, they will
9 enforce in whatever method is described in the
10 enforcement policy to make sure that's done.

11 Q Okay. Well, let me clarify when we'd have a
12 deviation and when we'd have a violation?

13 If you have something required to be done by
14 ANSI N45.2 that is not safety-related and they don't do
15 that, even though they have committed to implement this
16 particular plan, then would you have a deviation;
17 whereas, if it's something that's significantly
18 safety-related, you'd have a violation? How do you
19 distinguish those?

20 A The relationship to the event that we're
21 talking about and whether or not it is related to safety
22 or is a safety-related item, that determination has to
23 be made first before you start considering whether or
24 not it's a deviation or violation.

25 If, in fact, it has no relationship to safety,

1 and that has to be a very broad determination because
2 there are many things that are not on the surface or
3 directly safety-related but may affect something else
4 that's in the vicinity or what have you, and so you have
5 to first make that determination. Once that is made,
6 then you can get into the enforcement guidance that
7 talks about those items that are deviations and those
8 items which are violations.

9 And perhaps Mr. Johnson would like to talk a
10 little more about that subject in that he deals with
11 that on a daily basis where I don't and he may be better
12 equipped to describe that than I am.

13 Q I would appreciate that. But before Mr.
14 Johnson does that, I didn't mean to overlook you, do you
15 agree with the interpretation of criterion 7?

16 A I agree with the interpretation. The one
17 thing that confused me, when you initially phrased the
18 question you tied it to 50.55(e) and I can't make that
19 connection. I don't know what that meant.

20 But the way Mr. Johnson described it, I agree
21 with his interpretation. I cannot get that back to
22 50.55(e), which was the way you originally asked the
23 question the first time around. I still don't make that
24 connection, but I agree with the statement that Mr.
25 Johnson made as he described it.

1 Q Well, let me try my original question with you
2 and be sure you and I are clear.

3 If you discover that -- we'll just use Houston
4 Lighting & Power, Brown & Root 1981. If you discover
5 that Houston Lighting & Power was not adequately
6 controlling the design and engineering activities being
7 conducted by Brown & Root in 1981, do you then have a
8 violation of criterion 7 dealing with the control of
9 purchased services or could you potentially?

10 I mean, I realize it's how significant and all
11 that. I'm just trying to see is it in the ballpark,
12 control and purchasing services covers HL&P purchasing
13 services of Brown & Root as architect engineer and must
14 control those services.

15 A I think if we had that to face, we would face
16 it as Mr. Johnson described and that is we would face it
17 under the most appropriate criteria, which in my opinion
18 is criterion 3 or criterion 2, not criterion 7.

19 MR. SINKIN: Can we go off the record for just
20 one second, Mr. Chairman?

21 JUDGE BECHHOEFER: I was going to ask Mr.
22 Heishman to clarify --

23 MR. SINKIN: Go ahead.

24 JUDGE BECHHOEFER: Mr. Heishman, just in terms
25 of clarification of what you said earlier about

1 safety-related and having a very broad application, are
2 you including what's come around the Commission to be
3 known as important to safety questions when you made
4 that last answer?

5 MR. HEISHMAN: No, sir. What I was referring
6 to is what we use in the vernacular as two over one
7 criteria, if you will. May I explain that?

8 What I mean by that is that if we have, for
9 example, if we have Class 1-E cable trays running
10 through a building and we have non-1-E class cable trays
11 immediately above those, they then have the potential of
12 affecting the Class 1-E which are definitely
13 safety-related, and as a result of that they have some
14 relationship to safety.

15 And I cannot define important to safety and so
16 I don't want to use that term. What I'm trying to say
17 is that when we start looking at things that we are
18 going to enforce or make sure are correct, first of all,
19 we have to determine their relationship to safety. And
20 these terms that have been attached to them historically
21 have different meanings to different people and I'm not
22 smart enough to completely define those terms. So,
23 those that I'm trying to use today, I'm trying to be
24 very specific with things that I think I can describe
25 and understand. And, so, my description of

1 safety-related as I used it included those things that
2 surrounding equipment or conditions could affect makes
3 those items have a relationship to safety.

4 JUDGE BECHHOEFER: Okay. Thank you.

5 Q (By Mr. Sinkin) Since you've brought up this
6 Class 1-E item, would the NRC treat IEEE standards in
7 the same way as ANSI N45.2 standards in the sense that
8 if the Applicant committed to using those standards,
9 that those standards could become a basis for
10 enforcement action if they tied back to 50.55(e)?

11 MR. GUTTERMAN: Are we talking about the IEEE
12 standards that are referenced in 50.55a or are we
13 talking about some other standards?

14 MR. SINKIN: I think we may be talking about
15 the ones represented in 50.55a, but let me be sure.

16 Q (By Mr. Sinkin) I will not limit it to 50.55a
17 and the particular IEEE standard referenced in there.
18 I'm using the IEEE standard in the same way as the ANSI
19 N45.2 standard as a general setting of standards by the
20 industry through a particular mechanism they have,
21 IEEE. The Applicant says we will do our work pursuant
22 to the IEEE standard.

23 Do you have the same relationship with that to
24 50.55(e) as was described in ANSI N45.2?

25 MR. GUTTERMAN: So, I gather what you're

1 intending by your question is to exclude any standards
2 that might be imposed by regulation?

3 My problem is you're trying to create a
4 category that seems to be in two different
5 characteristics, some are imposed by regulation, some
6 are committed to, other IEEE standards aren't applicable
7 to nuclear power plants at all and may not be committed
8 to and it just seems like a very ambiguous question to
9 me.

10 JUDGE BECHHOEFER: Was your question about the
11 ones that the Applicant is committed to?

12 MR. SINKIN: Committed to. I thought I'd used
13 that term. But committed to.

14 Q (By Mr. Sinkin) Obviously the ones that are
15 imposed by regulation are -- let's talk about the ones
16 that are committed to.

17 A (By Mr. Johnson) Yes, sir. You're making a
18 linkage to 50.55(e). 50.55(e) is totally a separate
19 criteria, sits off to the side that says make reports.
20 It has nothing to do with how to conduct business or
21 anything. It just says pass information to the NRC and
22 define certain conditions under which that information
23 should be made available.

24 Going back to those standards which are
25 commitments by the licensee, and I'll explain the

1 mechanism by which that's done and it's very simple.
2 The licensee submits the FSAR, final safety analysis
3 report. I intend to build the plant in the following
4 manner. I intend to have the systems look like this
5 when I get done. I intend to do it in accordance with
6 and then describes various standards, IEEE 34 will be
7 used for this aspect, ANSI N45.2.6 is going to be used
8 to qualify our QA inspector.

9 The FSAR is an enforceable document, but it's
10 enforced through the deviations to those commitments.
11 If you can take one of those failings, you know, you
12 failed to meet your FSAR commitment and it will be able
13 to relate back to a violation of Appendix B or some
14 other piece of the regulation, then you've got an
15 enforceable item under the category of a notice of
16 violation, severity level 5, 4, 3, 2, whatever.

17 If it's merely I have reference that I'm going
18 to do something in accordance with this IEEE standard
19 which is not then part of the regulation and we find
20 they're not doing it that way, we go back to them and
21 say tell us how you're going to do it, either tell us
22 that you're going to change your FSAR, which then causes
23 the licensing staff to conduct a review of that item to
24 determine whether it's acceptable, or we say, you know,
25 then you will do it in accordance with that commitment

1 and tell us by what date you're going to have it done by
2 that, you know, along the lines of that commitment.

3 And, so, it gives the licensee the opportunity
4 to deviate. It gives him -- it gives the Staff then the
5 opportunity to either say do it in accordance with what
6 you said which we found acceptable because we accepted
7 your FSAR or change the FSAR, and that throws it back
8 into the arena of we'll now review for acceptability
9 that change of the FSAR.

10 Q So, that whole last category is where you have
11 deviations?

12 A Right. And those are recognized in the
13 enforcement policy as administrative actions.

14 Q So, if they've committed to ANSI N45.2 or
15 committed to particular IEEE standards in doing certain
16 work and you go to that work and you find a deficiency
17 that is significant which, if not corrected, all the
18 words we have in 50.55(e), you would enforce through
19 50.55(e) based on that violation of their commitment to
20 work through ANSI N45.2 or the IEEE; is that correct?

21 A No, sir, it's not because 50.55(e) is a
22 reporting requirement. It is not a requirement to be
23 used to enforce other commitments. If we found
24 something that were that serious that gave us a problem,
25 we're clever enough sea lawyers to find a licensee

1 procedure that said I will hang this pipe in this manner
2 and inspect it in that manner and then we'd go right
3 back to criterion 5, failure to follow procedure for
4 activity affecting safety and tag them with a notice of
5 violation.

6 Q Okay. The problem with my question was I went
7 the wrong way.

8 They have failed to implement a particular
9 part of N45.2 and that item that represents the failure
10 meets the criteria 50.55(e) and they haven't notified
11 you about the failure. Then you have an enforceable
12 situation from your perspective for failing to make a
13 required 50.55(e) report; is that correct?

14 MR. PIRFO: I'll object to that question it
15 assumes what the answer is going to be. I mean it's a
16 tautology. Assuming there's a 50.55(e) violation, do
17 you have a 50.55(e) violation. Well, of course the
18 answer is yes. I mean, it's a tautological question --

19 JUDGE BECHHOEFER: I think one problem is the
20 one question we probably haven't gotten an answer to yet
21 is -- maybe I'll try it.

22 If the Applicant has committed to follow
23 certain standards and it discovered that either it or
24 its contractor is not following those standards and they
25 have the -- they might have the requisite effect on

1 safety if they're not followed, does that -- could that
2 in those circumstances amount to a reportable item?
3 It's not getting into citing for violations or reporting
4 or anything like that. But should that be considered a
5 reportable item?

6 MR. HEISHMAN: It could, Mr. Chairman, but you
7 have to apply the same test to that that you would apply
8 to any test on a failure to report a reportable item. I
9 mean by that you have to decide that there is a
10 deficiency and that it would or could affect and all of
11 those things that are a part of it.

12 If that determination is made and if indeed
13 they made that determination and did not report it,
14 then -- and we became aware of that and we have in the
15 past, we would cite them for failure to meet the
16 requirements of 50.55(e). And I think there's -- I know
17 Region IV has done that before. And that is the intent
18 of the policy guidance, and so far as I know, that's
19 what the other regional offices do.

20 So, the conditions that you have described
21 providing it meets the yardstick of the guidance is
22 indeed a violation of 50.55(e).

23 JUDGE BECHHOEFER: Does that help you?

24 MR. SINKIN: I think that's pretty close.

25 Q (By Mr. Sinkin) Let's try a particular

1 example. Turning to page 1 of ANSI N45.2. I'm going
2 to --

3 A (By Mr. Johnson) Point 2.11?

4 Q 2.11, excuse me. I'm going to point out a few
5 things on the way to the question just so we have them
6 in our minds as we address the question.

7 On page 1 under definitions, the word
8 "design," it says, "Technical and management processes
9 which commence with identification of design input and
10 which lead to and include the issuance of design output
11 documents."

12 When you apply ANSI N45.2, are you applying it
13 to both the technical performance of design and the
14 management of design?

15 A That's a very broad question. I don't
16 understand.

17 Q Well, let me try and clarify it.

18 Technical I would think of as the actual
19 engineers doing their design. Management is the
20 management personnel who organize, give direction to,
21 guidance to the design and engineering process.

22 When you're applying -- when you're looking at
23 whether an Applicant has met the commitments of 45 --
24 let's see how we can abbreviate this, N45 --

25 A Well, let me -- this is a definition that

1 we've kind of accepted because we work in the industry
2 and, you know, when someone else asks you to focus on
3 it, you know, you tend to look at the words and you say
4 what does that really mean.

5 Technical and management on the one hand would
6 mean the technical adequacy, the correctness, does
7 everything hang together, and the management is the
8 overall process that brings it into being in a
9 controlled sense, the, if you will, we tag it with a
10 broad term quality assurance. There is a certain
11 control process.

12 Q Well, now, quality assurance would include
13 both technical and management, wouldn't it?

14 A It depends. Again, it's a very broad
15 definition. I wouldn't want to get into debating that.
16 It's that controlled process that gets the job done in
17 accordance with prescribed procedures that results in
18 the end product that is desired and that meets the NRC's
19 requirements.

20 Q Okay. Turning to page 2, section 2.2, program
21 procedures states that, "Procedures shall be employed to
22 assure that the design activities are carried out in a
23 planned, controlled, orderly and correct manner."

24 Now, in your understanding of the design
25 activities, does that include the management of the

1 design and engineering process?

2 A That is essentially that control process, that
3 management process.

4 Q Now, if you found a design and engineering
5 process going on at a nuclear power plant that was not,
6 in fact, planned but instead responded to whatever
7 happened to come up in a given point in the engineering
8 process rather than being planned and executed in a
9 planned way, would you have a violation of what is
10 required by ANSI N45.2.11?

11 MR. GUTTERMAN: I'm going to object to the
12 question because the question is very much like the
13 tautology that Mr. Pirfo was complaining about before.
14 The question is if the design wasn't planned, would you
15 conclude it's not planned? I don't think that's a
16 meaningful question.

17 Q (By Mr. Sinkin) All right. Let's go a step
18 further then. We'll skip that question.

19 Assuming that that is a violation of ANSI
20 N45.2, if you discover that you have a design and
21 engineering process going on at a nuclear power plant
22 that is not planned but instead is responding to
23 particular crises or items that happen to come up, do
24 you have a violation that's reportable pursuant to
25 50.55(e)?

1 MR. GUTTERMAN: I've got the same problem here
2 with the word "planned." Planned is such a vague term
3 and obviously it's a term that's used in the regulation
4 and I guess -- or in the standard. And if the witness
5 answers it with the understanding of what the standard
6 means, we all know it's tied to the specific meaning of
7 the standard, I won't have the same problem. But I
8 suspect that a lot of different people would have a
9 different understanding as to what the word "planned"
10 might signify.

11 MR. SINKIN: Well, let me try again.

12 Q (By Mr. Sinkin) Let's take a very specific
13 kind of engineering example. There is a certain order
14 in which engineering analysis should take place
15 regarding a certain decision to be made.

16 For example, the ultimate decision to be made
17 as to what equipment should be ordered in a given area,
18 to go in a given area. And in the process of doing your
19 engineering analysis you would look at various
20 conditions that might impact what equipment should be
21 ordered. In doing that process, you don't look at one
22 of the conditions that impacts the equipment, you go
23 ahead and order the equipment, you install the equipment
24 and then you go and look at the condition that impacts
25 the equipment. You've done it out of sequence in that

1 sense, demonstrating that the process was not well
2 planned.

3 Are you in the ballpark -- you haven't got
4 enough detail to know exactly whether you have a
5 potentially reportable finding. Are you in the ballpark
6 of having a potentially reportable finding? Would you
7 analyze that event as a potentially reportable finding?

8 (No hiatus.)

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1 MR. PIRFO: I object to that, the question,
2 itself, is just conceded that he doesn't have enough
3 information to determine whether there is nor not nad
4 whether he's in the ballpark is not relevant. I don't
5 recall "being in the ballpark" as being in the Nuclear
6 Regulatory Commission regulation the.

7 MR. GUTTERMAN: I've got a hard time
8 understanding what out of sequence means, whether it
9 means out of the sequence that the CCANP representative
10 thinks is logical or out of the sequence that's required
11 to produce an acceptable design eventually. It's a
12 question that's got the conclusion apparently built into
13 it.

14 JUDGE SHON: Mr. Sinkin, is there anyway you
15 can clarify with the Board where you're going with this
16 line of questioning and what you're driving at here.

17 MR. SINKIN: Let me try something else, maybe
18 that will help.

19 MR. PIRFO: Could we have a proffer? We've
20 been at this for some good deal of time and I think we
21 have -- Mr. Sinkin has taken a few swings at it.

22 MR. SINKIN: Well, the witnesses --

23 MR. PIRFO: I'll continue the metaphor, he's
24 taken swings at the ball and hasn't connected yet.

25 Q (By Mr. Sinkin) Let me go back to the original

1 question then and that was whether you find that a
2 program is not being planned as you understand the word
3 planned in ANSI N-45.2, the program is not being
4 adequately planned, do you have a potentially reportable
5 deficiency pursuant to 50.55(e)?

6 A (By Mr. Johnson) I'm not sure I understand
7 what all encompasses "plan." I may have my own view and
8 what I see as a plan but I don't regard it as a plan but
9 indeed it could be a plan. So I can't give you a yes or
10 no on that. Again, it would have to result in a
11 deficiency as contained in 50.55(e).

12 Q The absence, of a plan, itself, could not be
13 considered a deficiency under 50.55(e). Is that what
14 you're saying?

15 A The mere absence of a plan, itself, would not
16 be a 50.55(e) reportable item unless it results in a
17 deficiency.

18 Q So when you read 50.55(e), and you see the
19 words "significant breakdown in any portion of the
20 quality assurance program," you do not consider the
21 presence of a plan for activities as part of the quality
22 assurance program?

23 A You haven't had a breakdown in the quality
24 assurance program until you've had some effect on the end
25 product that that quality assurance program is supposed

1 to deliver. You have to have the deficiency. Then you
2 go back and you look and say, "Is this deficiency an
3 isolated event or even a series of deficiencies; are they
4 isolated events cropping up over here due to an
5 inexperienced inspector in an electrical area, and
6 cropping up over here because there was an improper
7 application of a procedure, and cropping up here because
8 a guy was sick that day and somebody else had to step in
9 and didn't know, or due these deficiencies -- we have a
10 picture that says overall, the licensee or the utility
11 does not train its people, does not train any quality
12 control inspectors and therefore the fact that they may
13 have week construction craftsmen, they're not catching
14 their deficiencies." And then you might -- then you
15 might conclude, "I have a QA breakdown." --

16 But the mere fact of the existence of a
17 deficiency, you're driven through the further analysis,
18 does that deficiency have a root cause which would have
19 been -- which arose from a failure to implement some
20 significant, you know, some part of the quality assurance
21 program. And therefore, you can make the extension that
22 that may led to other deficiencies and that's why it's
23 important for us to know so we can determine what
24 additional action might be required, and that hence the
25 50.55(e) report.

1 Q I'm going to try this again, because I think
2 it's important. The ANSI N-45.2.11 is titled Quality
3 Assurance Requirements for the Design of Nuclear Power
4 Plants. And we've already posited that the particular
5 utility has committed to implementing this. That's not a
6 question.

7 Now, N-45.2.2, says your design activities
8 shall be planned.

9 And my question is: If you find that the
10 design activities are not in fact planned, but are taking
11 place in a random way, they get done when they get done
12 here, they get done when they get done there, whether or
13 not the actual designs being produced have defects in
14 them, just the fact that they're being done in a random
15 way, rather than an unplanned way, do you have a
16 potentially reportable deficiency pursuant to 50.55(e)?

17 MR. GUTTERMAN: I've got an objection to this
18 question. And I've been struggling to try to figure it
19 what my problem with it is and I think the problem is
20 we're reading 2.2 out of context. If you read 2.2 in
21 context what it says is procedures shall be employed to
22 assure that design activities are carried out in a
23 planned, controlled, orderly and correct manner. Program
24 procedures shall cover the following as applicable.

25 The questions are all centering around this

1 generalized word "planned" and trying to make it
2 something independent of the context, which is to have 16
3 specific characteristics of the procedures that are used
4 to assure that the program will be carried out in a
5 planned, controlled, orderly and correct manner.

6 The word "correct" is also there by itself. He
7 could ask the same question about, "Well, if the design
8 isn't correct, is that a violation of ANSI N-45.2.11?"

9 It's not meaningful except in the context of
10 the specifics of section 2.2.

11 JUDGE SHON: Mr. Sinkin if I could step in for
12 a moment. I've watched you now for quite awhile as you
13 and these gentlemen have had this dialogue. And it's
14 apparent to me that there are two very distinct and quite
15 different mind sets here that resolve themselves and
16 revolve around 50.55(e) and the word "deficiency."

17 MR. SINKIN: That's very true.

18 JUDGE SHON: It appears to me that the panel
19 over here is interpreting a deficiency found in design
20 and construction to mean something wrong with the design
21 or something wrong with the construction. Not
22 necessarily something wrong with the organization or
23 anything like that, but the design and construction.

24 Is that right?

25 MR. JOHNSON: Yes, sir.

1 JUDGE SHON: And you have further said that if
2 that something wrong in the design shows a significant
3 breakdown in the quality program, then that's a
4 reportable deficiency. But if you have reason to suspect
5 that the quality assurance program hasn't been properly
6 organized, that's not a deficiency in design and
7 construction. Is that correct?

8 MR. JOHNSON: That's correct, sir. It has to
9 have the end result --

10 JUDGE SHON: It has to have an end result.

11 MR. JOHNSON: -- adversely affecting safe
12 operation of the plant. --

13 JUDGE SHON: You've said that several times
14 and I think Mr. Sinkin has been trying to get you to say
15 how far ones organization would have to deviate from that
16 set forth in ANSI N-45.2.11 before it would be reportable
17 and there simply isn't any way you can answer that,
18 because unless I'm mistaken, they'd have to have some
19 deficiency in design or construction and trace it back to
20 the quality assurance program before it would be
21 reportable.

22 Q (By Mr. Sinkin) So a deficiency in the design
23 process, itself, is not a potentially reportable item as
24 long as the designs produced do not have deficiencies in
25 them?

1 A (By Mr. Johnson) That's correct, sir. It's
2 analogous -- it's analogous to a basket ball game, you
3 don't call a foul if there's no effect.

4 JUDGE SHON: And in one other aspect of this,
5 he has several times tried in get you to define how far a
6 licensee would have to deviate from his commitments under
7 the FSAR or from his organization as required by the
8 regulations before it would be reportable under 50.55 and
9 if I'm not mistaken, your answer there is the same, you
10 can't tell without a design or construction deficiency.
11 Deviation from ones commitment simply is not related
12 directly to 50.55 reporting.

13 MR. JOHNSON: That's correct, yes, sir.

14 JUDGE SHON: I think you're going To get the
15 same answer each time you ask this series of questions
16 and it's been several times.

17 MR. HEISHMAN: I think there's one thing we
18 have to clarify on the record here. And that is because
19 we deem it not to be reportable, doesn't mean we don't
20 care or we're not going to do something about it.

21 JUDGE SHON: Of course not.

22 MR. HEISHMAN: What we're really saying that's
23 as Mr. Johnson described earlier, reportability is one
24 thing that we look at as one avenue and one thing to
25 worry about. Things being done right, there's many other

1 ways that we use and we're concerned with to get that
2 done. And so whether or not it's reportable is one
3 avenue that, sure, where we're worried about and we are
4 concerned about and we look at, but all of these other
5 things that we are discussing, we probably would handle
6 long before they ever got to the reportable stage if they
7 knew about them, by using the other tools that we have
8 available to us.

9 JUDGE SHON: And in fact, as you have described
10 it, there are many many things that could bring forth a
11 notice of violation or even a stop work order or any --
12 or a notice -- order to show cause or any of a number of
13 actions, which might have nothing whatever to do with the
14 reportability.

15 MR. HEISHMAN: That's correct.

16 MR. SINKIN: There's one significant problem I
17 have with this, you see, and that's 50.55(e)(1), which
18 talks about a significant breakdown in any portion of the
19 quality assurance program. But I'm in the going to argue
20 it anymore. I understand what the witnesses are saying.

21 Mr. Reis has something.

22 MR. REIS: There was a question mentioned about
23 scheduling before and I owe my potential witnesses
24 something for tomorrow. I could produce them all.
25 However, three of my five panel members I can order them

1 to appear. One of my panel members, because we didn't
2 think we'd get this far, has committed to take his wife
3 to Forth Worth tomorrow; one of them has a daughter in
4 the hospital and he's waiting for results on some
5 biopsies and another one is taking a final exam on
6 simulators in Nashville tomorrow. The other two don't
7 have any conflicts.

8 This overrides all that. If the Board thinks
9 it's of sufficient importance and doesn't think -- I
10 mean, we could finish next week in any event. If the
11 Board feels we should go tomorrow, I can get them all
12 here. There's no question.

13 And what the Board says, controls. I would
14 prefer not to get them all here. I don't want to throw
15 it to the Board but I recognize my obligation is to the
16 Board in the sense of I can get them here, I've got to
17 get them here. But I wanted to -- I wanted to know now
18 so that I can call them.

19 MR. SINKIN: We need to call.

20 JUDGE BECHHOEFER: Let's go off the record a
21 minute.

22 (Discussion off the record.)

23 MR. AXELPAD: As far as Applicants are
24 concerned, our cross-examination of this particular panel
25 would not be expected to be very lengthy. And if Mr.

1 Sinkin was able to finish sometime this afternoon, we
2 think this particular panel could be finished so that the
3 next panel, NRC staff panel could be heard tomorrow.

4 On the other hand, we don't want to create any
5 unusual burden upon the three panel members that Mr. Reis
6 has identified. It does appear from what Mr. Sinkin has
7 said that there is every reason to believe that the
8 hearing can be concluded next week. We would expect to
9 have some additional case by the Applicant, by
10 Applicants, which probably would not be too lengthy,
11 perhaps half a day or something like that.

12 If there is a clear understanding among the
13 Board and all the parties that if the NRC, staff panel,
14 next panel is not presented tomorrow, but that we would
15 start next Tuesday and take whatever steps are necessary
16 to in fact finish this hearing next week, and including
17 running evenings if necessary and Saturday, then perhaps
18 it would not be necessary to impose this burden on the
19 staff witnesses.

20 I would hope that there would be a very clear
21 understanding among the Board and all the participants
22 that we will use every reasonable effort to finish next
23 week. We can just envision the difficulty that would be
24 associated if we didn't finish next week in trying to set
25 additional hearing days some time later and trying to get

1 people back together.

2 Our main concern is getting the hearings
3 finished next week.

4 MR. SINKIN: Mr. Chairman, since all of my
5 remarks were off the record, I should put a little
6 something in here. We do support the idea of calling the
7 second panel on Tuesday; we do think quite clearly that
8 we can finish next week. And I am willing to do what it
9 takes to finish next week if that means going evenings
10 and Saturdays, except on one point, and that is I am not
11 willing to go forward if the Applicants present their
12 rebuttal case during the day, I'm not willing to be
13 pressed into an evening session that night to do the
14 cross-examination of that case. But other than that
15 exception, I have no problem with what Mr. Axelrad has
16 said.

17 MR. AXELRAD: I'm not sure I understand Mr.
18 Sinkin's comments. If we present our rebuttal or our
19 additional testimony, and then cross-examination begins.
20 I'm not sure if he's suggesting that he's entitled to
21 some kind of adjournment to prepare cross-examination.

22 MR. SINKIN: I'm just suggesting if the timing
23 of it were such that you finished your rebuttal in the
24 late afternoon of a given day at 5:30 or 6:00, I would
25 not be willing to come back right after dinner to go

1 forward; I would want to wait until next day, that's what
2 I was saying.

3 MR. AXELRAD: If we would present it in the
4 morning --

5 MR. SINKIN: I would do in it the afternoon,
6 right ask for an extended break, but other than that.

7 MR. PIRFO: Sounds reasonable.

8 JUDGE BECHHOEFER: I think we can do that.
9 Let's start Tuesday, though at 9:00 o'clock rather than
10 9:30. I think that will be -- I'm hoping we can leave
11 this stuff lying around here over the weekend.

12 MR. REIS: Thank you, Mr. Chairman.

13 JUDGE BECHHOEFER: Why don't we continue.

14 Q (By Mr. Sinkin) I do want to stick with this
15 particular section of ANSI N-45.2, but we'll move into
16 the actual meaning of the section. And let me just be
17 sure about one thing in Mr. Gutterman brought up, as I
18 read the program procedures, it says procedures shall be
19 employed to assure that design activities are carried out
20 in a planned, controlled, orderly and correct manner.

21 Would I be correct that in assessing compliance
22 with ANSI N-45.2, that you look not only at whether
23 there's a procedure but also at whether the procedures is
24 being effectively implemented?

25 A (By Mr. Johnson) That's a natural part of the

1 process of carrying out business in an orderly manner.

2 Q If an Applicant was not performing quality
3 assurance audits at all, and you were not aware of that
4 but they were, the Applicant was aware of that, would you
5 have a potentially reportable 50.55(e) violation?

6 A That's pretty sketchy information. If there's
7 no deficiency, there would be no 50.55(e) reportable
8 item. If the licensee chooses not to do quality
9 assurance audits, we're going to find that out.

10 If he hasn't identified that, then the severity
11 level that we would impose in our enforcement action
12 would be accordingly raised.

13 Q But if the Applicant had identified it, it
14 would be even higher, wouldn't it?

15 A If the Applicant had indication, willful -- now
16 you're getting into the enforcement policy, if there's
17 willful non-compliance with the regulations, it goes up
18 again, exponentially.

19 Q Turning to section 3.2 on page 32 -- I think
20 we'll skip that.

21 Q Looking at section 3.2 of the requirements,
22 item 19, the question is if you looked at the basic
23 design documents being used by an A/E and found that they
24 were not considering failure effect, simply overlooked it
25 so that their design process did not include it, would

1 you have a potential deficiency pursuant to 50.55(e)?

2 MR. GUTTERMAN: I'm sorry, could I have the
3 question? I just -- there was a phrase there, was it so
4 that the design was deficient? Is that what you said?

5 JUDGE BECHHOEFER: I thought it was would there
6 be a potential deficiency.

7 MR. GUTTERMAN: I thought there was a phrase
8 before that that had some conclusion about the actual
9 design products or is it just a process question.

10 MR. SINKIN: I see.

11 MR. GUTTERMAN: The problem may just be my
12 hearing.

13 MR. SINKIN: Let me try again.

14 Q (By Mr. Sinkin) Let's set it up with you have
15 a design document produced by a design organization that
16 should include a consideration of failure effects and it
17 does not include a consideration of failure effects, do
18 you have a potentially reportable deficiency pursuant to
19 50.55(e)?

20 A (By Mr. Johnson) In and of itself, you would
21 not, unless it led to the creation of a deficiency.
22 Let's get back to the concept of design.

23 The design has to be ultimately implemented and
24 the entire 50.55(e) brings you through that process. It
25 says you correctly design, you correctly construct, you

1 adequately test to see that you have achieved your end
2 product.

3 If there is a deficiency that is found in the
4 plant that could propagate through and cause unsafe
5 operations down the road and was a result of a breakdown
6 in your process for controlling, that's QA, a breakdown
7 in your process for conducting an adequate design, a
8 breakdown in your process for constructing and inspecting
9 or a breakdown in your process for verifying end result
10 compliance to the FSAR commitments, then tell the NRC.
11 Okay? That's a reporting requirement.

12 Now, any breakdown in there is also going to be
13 subject to enforcement under various parts of the
14 Appendix B or other regulations, the failures,
15 themselves.

16 Q I'm just trying to refine where in your mind
17 50.55(e) is triggered. I've got sort of the boundries,
18 Judge Shon helped me get the boundries of where it is and
19 where it isn't. I'm going in to where I kind of see as a
20 gray middle ground.

21 I'm in design engineering group, I have brought
22 some system design descriptions, some technical reference
23 documents, you come and you look at those and you say,
24 "Where is your analysis of failure effects."

25 A Uh-huh.

1 Q And I say, "We didn't do it."

2 A Uh-huh.

3 Q Now, I go and I look at a consultants' report
4 that the Applicants have had available to them, let's
5 say, and it says, "We found they weren't doing this." So
6 the Applicants knew they weren't doing it. Do you have a
7 deficiency that's potentially reportable in what you have
8 found in that design organization?

9 A Not if it has not led to the kind of deficiency
10 described in 50.55(e). What I would have might be
11 alternative enforcement measures, perhaps a deviation to
12 commitment, perhaps if it's a strong enough, a strong
13 enough criteria or strong enough failure in my mind, I
14 might choose to take it back to Criterion 5. I might
15 also throw in a little Criterion 17 if they haven't
16 reacted to correct a deficient situation that's been
17 brought up to them. I might even have a civil penalty
18 that could result. But all those are a might, "I might,
19 I might."

20 But the reporting requirement is only if there
21 is a deficiency that will affect down the road, that
22 could affect, reasonably could affect, the safe operation
23 of the plant.

24 Q I really am trying to stay right in inside the
25 word "deficiency" as used in 50.55(e). Would it be in

1 your view then same design and engineering organization
2 has produced technical reference documents, system design
3 descriptions, they haven't considered failure effects,
4 along has come a later engineer and has done a design for
5 a particular component and that design is complete but
6 not yet released to construction, it's just completed
7 within the engineering organization, and still no
8 consideration of failure effects has taken place, do you
9 then have a potentially reportable deficiency, as the
10 word "deficiency" is used in 50.55(e).

11 MR. GUTTERMAN: I have a clarification I want
12 to get that I don't think will disturb the thought you
13 are trying to capture. But the concern I have is we've
14 had a lot of testimony about designs being done in an
15 iterative process, where certain analyses are done even
16 after a design is out in the field, and you might -- for
17 example, there was testimony about missile protection
18 that you might do an analysis later in the design and put
19 in missile barriers. And I assume in asking this
20 question, you're not attempting to get at the question of
21 whether there's another iteration coming down the pike or
22 some future analysis is going to come.

23 MR. SINKIN: I think the witness, if that's a
24 consideration for the witness, the witness can say so and
25 I certainly can do a follow up question. I'm giving the

1 witness the amount of information that is available to at
2 the moment which is, you know you've completed this
3 particular design, if he wants to answer that you're
4 consideration is an additional consideration, he can say
5 so.

6 MR GUTTERMAN: My problem is you used the word
7 in your question the design is complete. The implication
8 of the word "complete" is that you're not going to do any
9 further analyses. And I just wanted that to be clear.

10 Q (By Mr. Sinkin) Let's assume for the moment
11 that we're dealing with preliminary design in the sense
12 that some design verifications process may go on later,
13 okay? Are you considerable with that?

14 A (By Mr. Johnson) May go on or it will go on as
15 part of the control process?

16 Q Supposed to go on later.

17 A All right.

18 Q We have this preliminary design that is
19 completed for a given component, it hasn't yet been
20 released to construction, but it is completed except for
21 the future verifications. And they have not considered
22 failure effects. Do you, at that point, have a
23 potentially reportable deficiency as it's used by
24 50.55(e)?

25 MR. GUTTERMAN: I don't think that's cured the

1 objection I made to the same or similar question a few
2 seconds ago. You're using the word "completed." And at
3 the same time you're telling me that you don't mean to
4 deal with the question about whether there's some future
5 analysis that may be done of failure effects.

6 Q (By Mr. Sinkin) I mean completed in the sense
7 that it has all the pieces of the design are in place.
8 All right? I'm not saying the design process, itself,
9 doesn't have more to come. All the pieces of the design
10 for their particular component are in place.

11 You walk in to their design and engineering
12 shop, and there is that design all the pieces are in
13 place, and you ask them, "Did you consider failure
14 effects when you did this drawing?" And they say no.

15 And the Applicants were aware that those
16 drawings were being done without failure effects being
17 considered. Should the applicant have made a potentially
18 reportable 50.55(e) report to the NRC regarding that
19 particular deficiency, or that particular situation, if
20 you want to call it a deficiency or not is the question.

21 A (By Mr. Johnson) That's such a hypothetical
22 situation. It's -- and it's so narrowly, narrowly
23 focused, and the situation could be any one of a number
24 of infinite number of things. Let's do this once again.

25 If the failure to have that analysis, that

1 piece, that necessary piece done and if the process
2 totally ignored some future implementation of that
3 analysis, it might be we're going to do this later on
4 before we we actually commission the plant, like final
5 pipe walk down, not where you've actually installed your
6 hangers and do your, you know, your final buff up on the
7 piping analysis, but if that were an accepted and then
8 you discovered that there was -- there was going to be
9 some real effect on the safe operation of the plant, some
10 piece of safety equipment could not perform its, in its
11 intended function in the intended manner then you would
12 have a deficiency and then you would say, "Yes, they were
13 reportable at that time."

14 Absent all of those conditions, it is not
15 reportable. There may be other enforcement actions that
16 we would employ, not liking the process. Because we
17 don't sit back in the NRC until a failure has occurred,
18 we would like not to; we've unfortunately had several of
19 those instances, they are painful to us. We like to
20 catch them as they're being made.

21 The fact that we have, for example, the facts
22 that we have senior resident inspectors and resident
23 inspectors on site, involved in a day-to-day basis with
24 licensee activities, will probably result in the NRC
25 becoming aware of things and correcting them before they

1 rise to the level of violations or reportable
2 deficiencies, or other enforceable matters. And that's
3 fine because we feel that's a benefit to the licensee and
4 we're doing -- we're meeting our mandate of public health
5 and safety. --

6 Q As the word "deficiency" is used in 50.55(e),
7 applying it to design, is there any point in the design
8 process where you would find a deficiency prior to
9 releasing the design for construction?

10 MR. PIRFO: I think that question has been
11 asked and answered before.

12 MR. SINKIN: I've tried to walk through the
13 individual parts of it, but I'm not sure we've had.

14 MR. PIRFO: I'll let the witness answer.

15 A (By Mr. Johnson) Would you restate it please.

16 Q (By Mr. Sinkin) In order to find a deficiency
17 in a design as those terms are used in 50.55(e), would
18 the design have had to be released for construction?

19 A At the time of the issuance of the guidance in
20 the way the regulation is written, it talks about
21 released for construction. It's talking and I'll talk a
22 little philosophically now.

23 It's talking about released for construction as
24 a convenient tag, a convenient definition of what should
25 have resulted from the process of design. You know, the

1 design process is largely complete. We know -- we
2 understand that design is an iterative process, and
3 future design on this system are going to effect the
4 design on this testimony. You're going to run into some
5 of those interferences.

6 The commission right now is wrestling with that
7 exact definition; feeling that the regulation may be
8 misleading; I won't -- I don't want to even characterize
9 it as misleading, but it -- what we would like and what
10 is very difficult to put in a reporting requirement, is
11 we would like to say to the licensees report a break-
12 down, a dificiency, a breakdown, a significant
13 dificiency, in your design process at such time as all of
14 the appropriate elements of that design process should
15 have functioned and should have caught and should have
16 corrected the problem.

17 Q Now, you seem to be defining all the way --

18 A I'm saying that's what we're aiming at today.
19 In the 1981 time frame, release for construction meant
20 that I have stamped the design, I have released it for
21 construction; there may be further design work that needs
22 to be done but, you know, that's a definition, that's
23 appoint. Hence our review.

24 Q You are currently redefining it to say it has
25 to be beyond the verification point?

1 A We are wrestling with where that should be,
2 largely based on questions raised by this Board, in
3 focusing our attention on that definition. That's all
4 very preliminary. I am trying to get you to understand
5 the process is a living one; the process doesn't have a
6 closed end point; the process has some end point that's
7 close enough that you can say yes at this point it should
8 be correct. And actually, Mr. Heishman is somewhat
9 involved in that.

10 A (By Mr. Heishman) Let me, if I might, go back
11 to your question for a moment. I think if I understand
12 what you're asking us and what you're trying to get into
13 the record, I think I can add that when you look at the
14 guidance that has been provided to the field in terms of
15 how they will evaluate reportability, it's very
16 specifically when we talk about a significant deficiency
17 that relates to a number of things, one of which is
18 design released for construction, and while that is a
19 very important part, that isn't -- there's four others
20 that also involve, one of which is breakdown in QA
21 program as the Board has pointed out very vividly to us
22 here.

23 The guidance however didn't always include
24 that. And my understanding of some of the reviews that
25 were done in this case while they did not describe

1 completely the fact that they had considered a breakdown,
2 it was stated in their document that they produced that
3 they did do that, however all of the individual writeups,
4 perhaps went into and pointed towards the other one which
5 talked about the design released for construction.

6 Now, what I'm leading up to is to try to get
7 back to your question and to answer it by saying,
8 If indeed the case you postulated, there has
9 been this design produced, and the design is
10 evaluated by an inspector or by an NRC person, such that
11 it is a breakdown in QA program, it's broad, it's more
12 than one item, it's all of the things that you have to go
13 into trying to define what a breakdown is, which is very
14 difficult, but there are circumstances under which you
15 could have a reportable defect, reportable event, which had
16 not yet been released for construction.

17 Now, I have said that to try to answer your
18 question as I understood it as we've been approaching it
19 now for the last couple of hours. And I really think
20 that the circumstances and I'm hard put to give you a
21 blow-by-blow description of what those conditions would
22 be, but I think there are a set of circumstances that
23 could be postulated wherein you would have a breakdown in
24 quality assurance caused by faulty design and you would not
25 have design which had been released for construction.

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

2 JUDGE BECHHOEFER: Mr. Johnson, do you agree
3 with that?

4 MR. JOHNSON: Not in the 1981 time frame, that
5 was not our interpretation. Largely because the field,
6 the regional offices, regional inspectors, inspect
7 implementation, all of our inspection program, if you
8 review it, starts with review the procedures for putting
9 piping together, review the process that's then in
10 progress, and review the records afterwards.

11 It never says go back and do the design. Only
12 recently has the NRC staff been involved in doing design
13 inspections under the IDI and the IDVP programs.

14 A definition that says released for
15 construction means the drawing has gone to the field,
16 it's going to be implemented now and that's where we
17 would get involved. And that's consequently anything
18 that goes on in the large black box before that time
19 frame of kicking out that design, we don't inspect.

20 It's just not part of our program. In today's
21 environment, we're getting involved in design. We're
22 finding that that's a large area of potential problems
23 and that we ought to be smarter and doing some inspection
24 in that area.

25 (No hiatus.)

1 JUDGE BECHHOEFER: Do you agree or perhaps the
2 implementation program you just described, at least as
3 it existed in 1981, might not have complied with all
4 aspects of what 50.55(e) provided?

5 MR. JOHNSON: Well, I believe our
6 interpretation of 50.55(e) that we used at that time was
7 in accordance with what our headquarters would have
8 expected of us and was certainly in accordance with the
9 practices being used in other regions.

10 MR. HEISHMAN: Mr. Chairman, in my testimony I
11 said very clearly in the short paragraph that I provided
12 that there has been historically differences of opinion
13 regarding what 50.55(e) means and how it should be
14 implemented. And, in reality, the record would show
15 that prior to the time this guidance was issued, there
16 was at least two other sets of guidance that were issued
17 to try to clarify what the intent of that rule was.

18 So, I'm not surprised and I don't think
19 anybody should be surprised that there might be some
20 differences in evaluation of what the rule meant, what
21 the guidance said, what it intended. However, I don't
22 think we're very far apart and I don't think that it's a
23 very significant thing in terms of what it is that we --
24 the rule was intended to do in the first place and is
25 still intended to do and that is to make the Commission

1 aware of significant problems such that they can decide
2 whether or not it is appropriate that they take action
3 at that facility or at other facilities based on what's
4 happened. And I think in reality this rule has worked
5 rather well.

6 As Mr. Johnson has pointed out, there are some
7 things going on to try to make it better which we ought
8 to try to do all the time. We ought to try to improve
9 on how we do business as we become smarter and learn
10 more about it. And there are some things going on, but
11 it's not germane to what happened in 1980 or '81.

12 MR. PIRFO: If the Board please, I suggest
13 this is a good time for a break.

14 MR. SINKIN: Sure.

15 JUDGE BECHHOEFER: Yes. That's fine. Why
16 don't we -- fifteen minutes.

17 (Brief recess taken).

18 JUDGE BECHHOEFER: Okay. Back on the record.

19 Q (By Mr. Sinkin) Since we're in this
20 particular section of ANSI, I'd sort of like to jump
21 ahead, Mr. Taylor.

22 On page 2, the section design input
23 requirements, if you turn over to page 3, the very last
24 requirement number 28 talks about "requirements for
25 preventing personnel injury, including such items as

1 radiation hazards." As I read that, that particular
2 item would be the one that would cover ALARA reviews and
3 that sort of thing. Is that how you read that?

4 A (By Mr. Taylor) Quite close, yes.

5 Q On page 50 of your testimony you have analyzed
6 the findings in the Quadrex report that you felt were
7 related to ALARA. What I wanted to do was to show you
8 CCANP 125.

9 JUDGE BECHHOEFER: 123?

10 Q (By Mr. Sinkin) Excuse me, CCANP 123, which
11 is an HL&P audit conducted in September of 1979. I
12 don't believe you would have seen that before, would
13 you, Mr. Taylor?

14 A (By Mr. Taylor) No.

15 Q What I wanted you to do was review -- it's an
16 excerpt from an audit. I wanted you to review the
17 findings of that audit and see if that would have
18 influenced your determinations on reportability made
19 starting at page 50 and going forward of your
20 testimony.

21 MR. GUTTERMAN: The question's if you knew in
22 writing your testimony that in 1979 there had been this
23 audit with these results, would that have changed your
24 testimony?

25 MR. SINKIN: Would that have influenced your

1 testimony, yes.

2 MR. PIRFO: Mr. Chairman, I was trying to find
3 the document. I wasn't aware that Mr. Sinkin is again
4 referring a witness to a rather lengthy document I
5 understand which he has only limited familiarity with
6 before. I'm not sure that the witness can adequately
7 famaliarize himself with the document and answer
8 hypotheticals on the basis of that document having being
9 presented to the witness while he's sitting on the
10 stand. So, I'd object to that procedure.

11 I don't have any particular objection to the
12 question, it's the way in which the intervenors are
13 seeking an answer to the question. *

14 MR. SINKIN: The alternative, Mr. Chairman,
15 would be for the witness to review it overnight and come
16 back and testify about it.

17 MR. PIRFO: No, that's not the alternative.
18 The alternative is to give him the documents ahead of
19 time.

20 A (By Mr. Taylor) No, I'm not sure it would
21 change my mind, strangely enough.

22 Are you ready for me?

23 Q (By Mr. Sinkin) Oh, sure.

24 A Going to the third page, that dated October 1,
25 memorandum from Mr. Frazar to Mr. Turner, the first

1 element seems to be that there was no subcontract issued
2 to NUS to give NUS the requirements to perform the
3 shielding design calculations.

4 Now, the mere absence of a contract, per se,
5 in a technical world is not very meaningful. I would
6 gather that Brown & Root had a kind of an open-ended
7 agreement with NUS to perform things. That could have
8 been done in an informal memorandum, it could have been
9 done over the phone. NUS is a recognized expert in this
10 type of work. The mere fact that no contract existed is
11 not a technical issue in my mind.

12 Q That's the first item. There are other items.

13 A Okay. The second item, Brown & Root has no
14 requirements for review or approval of shielding design
15 calculations received from an outside organization, such
16 as NUS. I think it would be fairly typical that when an
17 A&E recognizes he doesn't have the internal talent to
18 perform a particular aspect of design and hires an
19 acknowledged expert in the field to do it, that he's
20 going to rely on that acknowledged expert to do it
21 properly and perform its own QA function over that
22 aspect.

23 And basically that's the root of all of this.
24 Again, within the context of 50.55(e), it does not
25 suggested a deficiency in a technical world.

1 Q But it does say that Brown & Root was doing
2 some of its own calculations, does it not, and that
3 flux-to-dose conversion factors were not used to give
4 area dose rates and that's in the Brown & Root
5 calculations? That ceiling and floor shielding design
6 calculations could not be found, that design drawings
7 were not dated or identified by revision number, aren't
8 those all Brown & Root documents?

9 A I'm not entirely sure. The next sentence
10 seems to deal with shielding design calculations
11 performed by Brown & Root had no computer models in
12 sufficient detail to allow an adequate review. That
13 sounds like a judgmental element from somebody,
14 apparently probably an HP, health physics specialist.

15 I don't know that I can make anything out of
16 that yet. "Flux-to-dose conversion factors were not used
17 to give area dose rates." I don't know. It might be
18 the same thing as the preceeding sentence, I don't know.

19 I don't know what to make out of the second
20 one or the next one which is ceiling and floor shielding
21 design calculations could not be found. That would seem
22 to imply that they hadn't been done, which of and by
23 itself is not a deficiency.

24 Q Well, let's take the overall conclusion of the
25 quality assurance reviewer that a complete engineering

1 review of the shielding design and ALARA review
2 documentation should take place based on deficiencies
3 found in this audit. If you knew that a complete review
4 of the ALARA program had been called for in September of
5 1979 and if you -- actually if you look at BR-35, CCANP
6 125, I think there's a pretty clear indicator in there
7 that that was not done. And you then get Quadrex also
8 making findings 4.6.2.1(b) through the end about ALARA
9 deficiencies and the way they were conducting ALARA,
10 would you put that all together and perhaps change your
11 idea about whether a potentially reportable condition
12 existed?

13 A No, I don't believe I would. I think all I'm
14 really saying is that an inability in Brown & Root to do
15 something simply existed from 1979 on through 1981. The
16 condition hasn't changed any. They just simply haven't
17 had the ability to do the work. It could have
18 preexisted 1979.

19 JUDGE BECHHOEFER: Mr. Sinkin, are you going
20 to ask further questions on --

21 MR. SINKIN: No, I'm not, Mr. Chairman.

22 JUDGE BECHHOEFER: Do you still have the
23 document?

24 MR. SINKIN: No. I'll give it back to him,
25 Mr. Chairman.

1 JUDGE BECHHOEFER: Mr. Taylor, how would you
2 evaluate the last sentence in the first paragraph on the
3 second page which is dated October 1, '79, and would
4 that have affected any of your conclusions on the ALARA
5 findings of Quadrex?

6 MR. AXELRAD: Mr. Chairman, could you repeat
7 again which sentence -- which page you're talking about?

8 JUDGE BECHHOEFER: Last sentence of the first
9 paragraph on the second page, the page dated October 1,
10 '79.

11 MR. TAYLOR: I think I understand the
12 question, sir, and I think I would give you the same '
13 answer. The text of this paragraph tells me that the
14 work simply hasn't progressed far enough to know for
15 sure that our regulatory requirements in this regard
16 have been complied with or have not been complied with.
17 The work just hasn't progressed that far.

18 JUDGE BECHHOEFER: So, when they use
19 breakdown, you don't correlate that with quality
20 assurance breakdown?

21 MR. TAYLOR: I don't see the word breakdown
22 here.

23 I think we're basically talking about and he's
24 used the words engineering program as disassociated
25 necessarily from a QA program, the engineering program

1 may not be working.

2 I guess maybe an analogous situation is that
3 if I'm not able to repair my car, it's going to either
4 sit in the garage or I'm going to take it somewhere
5 else, but I have that option. And until I make that
6 option, I haven't hurt anybody.

7 JUDGE BECHHOEFER: Now, turn four pages
8 farther on. The page that's headed by the word
9 "discussion." You see -- under the summary -- do you
10 see that where it says discussion? Now, under summary,
11 insofar as that first sentence applies to the ALARA
12 review, how would you interpret that?

13 MR. TAYLOR: I think much the same way. He's
14 used the word quality which is kind of one term versus
15 quality assurance or quality control which are really
16 quite other terms. Both of those are mechanisms to get
17 quality or to assure quality, verify quality. But
18 quality is a succinct term. Now, quality means
19 compliance with rules, regulations, technical
20 requirements, et al. I think what they're really saying
21 is they're not progressing. They're simply not
22 progressing.

23 MR. GUTTERMAN: Mr. Chairman, I don't know if
24 this will help, but I would point out if you turn back
25 two pages and look at the makeup of the audit team,

1 you'll see that two of the team members were health
2 physicists. It's not purely a quality assurance audit.

3 JUDGE BECHHOEFER: I think I've asked the
4 questions I wanted to ask. I just wanted to see if your
5 answer differed in any significant way with Mr.
6 Frazar's. I don't think they did.

7 MR. TAYLOR: I would take you back one more
8 page, if I may, or back on really the same page and up
9 under discussion. The bottom two sentences, three
10 sentences indicate that there are 17 audit deficiencies
11 identified during the performance of the audit. Eleven
12 deficiencies were categorized as discrepancies, which
13 has a succinct definition on the preceeding page, a
14 deficiency in characteristics, documentation or
15 procedure that renders the quality of the activity
16 unacceptable or indeterminate.

17 I suspect that what they're talking about
18 here, without having much more information is, that it's
19 indeterminate. Now, that's a condition then where
20 they -- if I'm correct, where the engineering has not
21 progressed enough to evaluate. It's indeterminate and I
22 believe that's what they're really referring to.

23 JUDGE BECHHOEFER: That's my questions on this
24 document at least. Thank you.

25 Q (By Mr. Sinkin) Does the NRC consider part of

1 the quality assurance responsibilities of the Applicant
2 to be the auditing of the engineering process itself as
3 opposed to looking at designs released for construction?

4 A (By Mr. Taylor) Yes.

5 Q So, these two audits that you've looked at
6 today, one was the broader engineering audit, one is the
7 ALARA shielding audit, would be fulfilling that function
8 of auditing the design process, would they not?

9 MR. PIRFO: I'll object to that. The witness
10 didn't have enough time to famaliarize himself with
11 those documents or doesn't know anything about that
12 particular aspect of the --

13 A (By Mr. Taylor) Mr. Sinkin, I can really draw
14 two conclusions in response --

15 MR. PIRFO: I believe I have an objection.

16 JUDGE BECHHOEFER: I think there is an
17 objection.

18 Q (By Mr. Sinkin) Let me just return you the
19 two audits that I'm referring to and I'm really
20 referencing back to the question I just asked you,
21 whether the Applicants -- the NRC considers the
22 Applicants have a responsibility to audit the design
23 process as well as the end product of the designs
24 released for construction. Your answer was yes.

25 My second question was whether these two

1 audits fit in your mind in that requirement to audit the
2 design process?

3 MR. PIRFO: I'll object to that. He hasn't
4 remedied it by handing the documents to the witness. I
5 mean that's --

6 MR. SINKIN: The documents are there. He's
7 now free to review them and make these determinations.

8 MR. PIRFO: My objection is to the procedure
9 Mr. Sinkin is following by putting documents in front of
10 the witness for the first time and asking him to give a
11 seat of the pants opinion about whether there's a
12 violation or whether there's a problem here or whatever
13 it is.

14 He's asking the witness to speculate. It's a
15 little bit higher degree of speculation, he's put some
16 papers in front of him, but it's no less speculation.

17 MR. GUTTERMAN: I'd point out that the papers
18 that the witness has in front of him are not complete
19 audit packages, they're just selected extracts and they
20 don't even describe the audit process or the
21 deficiencies found in the audit.

22 MR. SINKIN: It does have the deficiencies
23 found in the audit and they're identified individually.

24 MR. GUTTERMAN: It's just not there for BR-28,
25 Mr. Sinkin. I can't agree with your characterization.

1 MR. SINKIN: BR-35 is there. Maybe BR-28
2 doesn't have the specific -- if that's a problem, we can
3 restrict the question to BR-35.

4 JUDGE BECHHOEFER: I assume your objection is
5 still standing?

6 MR. PIRFO: We'd like a ruling on it.

7 JUDGE BECHHOEFER: Yes. I'm asking my
8 technical member whether he has enough information to
9 answer the question.

10 JUDGE SHON: Mr. Taylor, do you think you can
11 answer the question on the basis of what you've been
12 able to glean from BR-35, for example, in the past few
13 minutes?

14 MR. TAYLOR: Just a moment, sir.

15 May I answer the question in two pieces? In
16 BR-28 --

17 JUDGE BECHHOEFER: Do you think you have
18 enough information to answer?

19 MR. TAYLOR: No. Well, in part yes, in part
20 no, that's the problem.

21 In BR-28, absolutely. No, I can't tell
22 whether it was a programmatic audit or a technical
23 audit.

24 In BR-35 it would appear that it was purely a
25 programmatic audit because of the nature of the findings

1 that are attached. They almost entirely deal with
2 things that I would consider programmatic.

3 Q (By Mr. Sinkin) Mr. Taylor, turning to page 5
4 of ANSI N45.2, section 6.3, methods. It's actually in
5 section 6 is design verification, section 6.3 are
6 methods for design verification and there are three
7 acceptable verification methods that are outlined
8 there. The first one is called a design review.

9 And in the section 6.3.1 design reviews are
10 discussed. And about the middle of the first paragraph
11 it says, "The depth of review can range from a detailed
12 check of the complete design to a limited check of such
13 things as the design approach and the results obtained."

14 Finally, there is a series of questions that
15 are suggested for how to conduct a review pursuant to
16 this section of ANSI N45.2.

17 Would you agree with me that given this
18 description in ANSI N45.2, the Quadrex report would meet
19 the description of what a design review is?

20 MR. GUTTERMAN: Are you talking about the
21 Quadrex report being a design review of the entire
22 design on the South Texas Project?

23 MR. SINKIN: ... the sentence I pointed out
24 states, there are two approaches, the depth of the
25 review can vary. One approach is a limited check of

1 such things as the design approach and the results
2 obtained.

3 MR. GUTTERMAN: Uh-huh.

4 MR. SINKIN: In that description, looking at
5 the questions suggested for design review, does the
6 Quadrex report appear to you to be a design review
7 pretty much as described in this section of ANSI N45.2?

8 MR. GUTTERMAN: My question is are you getting
9 at does it constitute this kind of design review for the
10 entire project design or for some limited aspect of what
11 was reviewed in the Quadrex report? Is the question
12 you're directing to the witness do you look at the
13 Quadrex report as constituting a design review of the
14 design of the South Texas Project within the meaning of
15 this sentence? Are you trying to be that broad about it
16 is all I'm asking?

17 JUDGE BECHHOEFER: I have more or less a
18 problem with the whole -- possibly with the whole
19 question. Section 6.2 is part of a section that seems
20 to me to be limited to design verification. And I have
21 never heard the Quadrex review described or even be
22 suggested to be a design verification review. So, is
23 this even a relevant question is my question as a layman
24 reading some regulations?

25 MR. GUTTERMAN: I think you're raising a

1 legitimate question, Mr. Chairman. The first sentence
2 of section 6.3 talks about the responsible design
3 organization identifying and documenting the particular
4 design verification methods to be used. And Quadrex
5 obviously wasn't the responsible design organization.

6 MR. PIRFO: Should I rule on the --

7 JUDGE BECHHOEFER: My own inclination would
8 be --

9 MR. SINKIN: I'd like to respond to that, Mr.
10 Chairman.

11 JUDGE BECHHOEFER: Right.

12 MR. SINKIN: First of all, the responsible
13 design organization I see as fitting Houston Lighting &
14 Power identifying the particular method to be used which
15 was design review. They can then contract that out or
16 do it themselves. They chose to contract it out.

17 The fact that the term -- what it says under
18 design verification at the first sentence is "Measures
19 shall be applied to verify the adequacy of design."
20 Quadrex has termed it an assessment of the technical
21 adequacy of the STP technical design. I see lots of
22 direct parallels. And if you look at the series of
23 questions that are asked in ANSI, those are precisely
24 the questions that are being asked by Quadrex.

25 JUDGE SHON: I don't think Quadrex was ever

1 intended to verify the design of the South Texas
2 Project.

3 JUDGE LAMB: Especially within the context of
4 NRC regulations.

5 JUDGE BECHHOEFER: Even these standards.

6 JUDGE SHON: Or ANSI standards.

7 MR. GUTTERMAN: I think the testimony of a lot
8 of witnesses has already demonstrated that, Mr.
9 Chairman.

10 MR. PIRFO: I have another problem in that I'm
11 not --

12 JUDGE BECHHOEFER: Well, I think we're --

13 JUDGE SHON: I guess -- we have a group of
14 experts here on this document. It's part of their
15 testimony. My impression was that this section 6 covers
16 things like looking at the design of a particular system
17 or a particular piece of equipment and verifying that
18 design by looking over drawings and specifications and
19 such.

20 Is that not correct? Isn't that what this is
21 all about?

22 MR. TAYLOR: That's what I believe it's all
23 about.

24 JUDGE SHON: And to come in and review
25 somebody's organization for making all kinds of

1 different designs isn't this sort of design review, is
2 it?

3 MR. JOHNSON: No, sir. I see the Quadrex
4 report has been characterized in the testimony as like
5 an audit, fairly narrow focus, lots of questions and
6 all, but they certainly didn't provide us with the
7 necessary detail.

8 And then Mr. Taylor's being asked a question
9 that as his supervisor was not what I assigned him to do
10 and was not what the Board asked us to do and that was I
11 gave Mr. Taylor the Quadrex report and said, "Here,
12 please review these things. Try to think in terms of
13 the guidance that we had on the street in 1981 and what
14 are your conclusions on these various items in there as
15 to their reportability."

16 And I didn't ask him to look at the thing and
17 see if it was an adequate design review and verification
18 program for the STP design and I don't think he can
19 answer that question here today like that. Even if we
20 have a series of elements here that say, you know, this
21 is what it might constitute, because Mr. Taylor didn't
22 do that kind of design. I'm the supervisor and that's
23 what I told him to do.

24 MR. SINKIN: Well, Mr. Chairman --

25 JUDGE BECHHOEFER: I would evaluate that

1 question as legally irrelevant, whatever the technical
2 implications of it might be.

3 I'm told I have to sustain my own objection.

4 MR. SINKIN: Well, Mr. Chairman, I would just
5 note for the record that if you compare the questions in
6 the Quadrex study on page 2-13 and 2-14 to the questions
7 suggested for a design review in ANSI N45.2, they are
8 very similar.

9 MR. PIRFO: I'll move to strike that for an
10 obvious reason. Mr. Sinkin's not testifying here.

11 MR. SINKIN: Well, it's in the nature of a
12 motion for reconsideration of the Chairman's ruling on
13 his own objection perhaps.

14 JUDGE SHON: What page in the Quadrex report
15 do you --

16 MR. SINKIN: I'm sorry. I think it's 2-13 and
17 2-14. Let me be sure.

18 I guess my problem, Mr. Chairman, is having --
19 just because ANSI uses that term design verification,
20 having that whole section ruled irrelevant to Quadrex
21 because Quadrex is not verifying a particular design I
22 don't think is appropriate.

23 MR. PIRFO: Mr. Chairman, Mr. Sinkin has asked
24 if given the ANSI term design review, would Quadrex be
25 considered a design review. But then he quarrels with

1 the larger heading of design verification.

2 I don't understand what he's trying to
3 accomplish there. He wants Mr. Taylor to adopt the
4 designation or asks Mr. Taylor if it would fit under the
5 rubric of design review as used in ANSI, but does not
6 want to use the entirety of the ANSI definition. And
7 design verification is certainly the heading there.

8 I don't understand the objection.

9 MR. GUTTERMAN: I don't understand what
10 difference it makes what somebody characterizes the
11 Quadrex report as. It's a document that says certain
12 things and the question is having heard those things,
13 was it reportable.

14 MR. PIRFO: I might add, Mr. Taylor's
15 characterization is probably immaterial. Probably it
16 is.

17 MR. SINKIN: Is it or isn't it?

18 MR. PIRFO: Well, since he didn't do it --

19 JUDGE BECHHOEFER: We will not change -- we do
20 not find that any witness or the Quadrex report itself
21 describe it as what we view these regulations or these
22 standards to mean under design verification so that I
23 still think the question is legally irrelevant.

24 Q (By Mr. Sinkin) Mr. Johnson or Mr. Constable,
25 in your testimony you discussed the 50.55(e) guidance

1 and on page 7 you say in your inspection of
2 construction, you reviewed the screening mechanism for
3 50.55(e). Did you do an inspection of engineering that
4 also reviews that mechanism?

5 A (By Mr. Johnson) The inspection that's
6 referred to is that inspection program that's called out
7 in your manual chapter 25-12, we review the 50.55(e)
8 reporting process that's in place, in use by the
9 licensee and that also covers -- obviously covers any
10 inputs to that 50.55(e) process.

11 Q So, it would cover engineering?

12 A It would cover any inputs which would surface,
13 nonconforming conditions. NCR's typically is what is in
14 use and that can come from a craftsman, it can come from
15 a QC inspector, it can result as an engineering
16 discrepancy, whatever. Different utilities will call it
17 different things, but it's reporting nonconforming
18 situations which have been plugged into this process.

19 Q Would that include the quality assurance
20 audits of the engineering department?

21 A Typically coming out of the -- any quality
22 assurance audit will be whatever the local quality
23 assurance organization uses to identify its own
24 nonconforming conditions. Corrective action reports or
25 whatever they tag them as, you know, these are the

1 specific problems that we have found that need to be
2 addressed and corrected. Coming out of that then you
3 could have conditions which could find its way into the
4 evaluation process.

5 Q Just to be quite specific, ADR's, audit
6 deficiency reports, from audits of engineering?

7 A Can't speak to that because I'm not that
8 familiar with the ADR system. I haven't inspected it at
9 the South Texas Project.

10 Q Mr. Taylor?

11 A (By Mr. Taylor) I haven't inspected there in
12 years. I don't know what it means.

13 Q Mr. Constable?

14 A (By Mr. Constable) I just don't recognize the
15 term. Inspections are done under my supervision, but I
16 don't personally do them.

17 Q Mr. Heishman, you're the only one left.

18 A (By Mr. Heishman) I'll make it unanimous. I
19 don't know what it means either.

20 Q Okay.

21 In looking at your testimony on page 8, Mr.
22 Constable, Mr. Johnson, answer 7 discussing whether the
23 Quadrex report as a whole should have been turned over.
24 In the third sentence you say that what is at issue is
25 whether and to what extent the report represented

1 deficiencies that were significant in whole or in part
2 and whether this represented a quality assurance
3 breakdown.

4 Are you referring to the Houston Lighting &
5 Power review team convened on May the 8th and what they
6 knew and didn't know in terms of reportable deficiencies
7 leading to potentially reportable deficiencies?

8 A (By Mr. Johnson) I'm sorry, you'll have to --

9 MR. PIRFO: I don't have any problem with what
10 Mr. Sinkin wants to get to, what I think the answer is,
11 but I have a problem with the way he asked it.

12 MR. SINKIN: All right. I'll try again.

13 Q (By Mr. Sinkin) When you say that what is at
14 issue is whether and to what extent the report
15 represented deficiencies that were significant, et
16 cetera, what you say in that sentence, are you saying
17 that -- are you putting that in the context of what the
18 Houston Lighting & Power review team, Mr. Goldberg, Mr.
19 Robertson, Dr. Sumpter, on May the 8th knew? Is that
20 what's at issue as far as your sentence is concerned?
21 May the 8th, 1981.

22 A (By Mr. Johnson) We're looking at what our
23 views are, not what their views are.

24 Q Okay. Thank you.

25 A I hope that's -- you know, I guess I

1 understand now what you're getting to.

2 Q Mr. Taylor, when the Quadrex report would make
3 a finding like there are many errors in a given area, do
4 you remember findings like that?

5 A (By Mr. Taylor) Uh-huh.

6 Q Did you make any effort to go and find where
7 those errors were and evaluate them in your own mind for
8 their significance?

9 A In each case where there was a reference I
10 went to that reference and evaluated that reference as
11 best I could. If I could determine what type of error
12 it was, the magnitude of the error, then, yes, I
13 attempted to make an assessment. Very rarely is that
14 type of information there.

15 (No hiatus.)

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1 Q And so those instances where it wasn't there,
2 you did not go beyond the Quadrex report to try and find
3 the error?

4 A (By Mr. Taylor) No, sir.

5 Q Mr. Constable, on page 10, the answer starting
6 at the top of the page, you state about the middle, more
7 or less third of the way down, a sentence starting, "It
8 was conveyed to me," what specifically was told to you
9 about the approach that you should take to third party
10 reviews of construction and management effectiveness?

11 A (By Mr. Constable) We discussed this off and
12 on and it's basically just as I stated there that we
13 really don't have a precedent set for these kind of
14 things that really aren't part of the regulatory process
15 formally. We want to encourage the utilities to go out
16 and do these self studies because we think they're
17 beneficial to the utilities and we see no reason for
18 getting into it beyond any issue that might be
19 potentially reportable. We would expect them to report
20 those things to us. A lot of these kind of studies go
21 on.

22 Q Were you told not to go and review them?

23 A No, never. In fact, sometimes we did. If we
24 had an interest or thought it impacted an area that we
25 were concerned with, we would go look at the reports.

1 A (By Mr. Johnson) Let me add to that. I think
2 there's a very important point to be added to that. The
3 kind of avoidance of a chilling effect that we were
4 trying -- that was being tried to be avoided, and I was
5 an inspector at that time frame myself, that kind of
6 chilling effect we were trying to avoid was one of taking
7 an audit or some other study that the licensee had done
8 to improve his own operation and then as an inspector to
9 leap on the findings in there and go and beat the
10 licensee over the head with those things.

11 We weren't to use those findings and write them
12 up in our reports as basis for enforcement against the
13 licensee. We were welcome to and we were encouraged to
14 be aware of what was going on, read the reports, perhaps
15 they opened up useful questions for us to conduct our own
16 inspections in that area if it suggested something that
17 was of interest to us, to monitor the corrective action
18 and if corrective action wasn't forthcoming, then we've
19 got a quality assurance problem potentially if the, you
20 know, depending on the significance of the failure to
21 take corrective action.

22 But that's the kind of thing. It's not to take
23 findings and, you know, stamp a -- slap an NRC inspection
24 report on the top of it and say, "We're going to use
25 this." That would simply be a chilling effect on

1 licensees, they would not be willing to conduct the kind
2 of hard-hitting internal, you know, self-examinations
3 that we wanted of them, if they understood that they were
4 going to be seeing that coming right back at them as an
5 NRC bullet.

6 Q The NRC conducts an inspection process that's
7 predominantly dependent on the self policing by the
8 construction permit holder. Is that not true?

9 A The NRC's inspection program depends very
10 heavily on licensee compliance to the regulations. We
11 are a small inspection force; the total number of hours
12 that will be put into the inspection of a plant during
13 construction is about 20,000 manhours. That's ten man
14 years over a ten year construction period, that's one man
15 on site 40 hours a week, 50 weeks a year; licensees peak
16 construction force can be as much as 8500 people on site,
17 you spread over a 20-hour rolling four by ten shift.
18 Yes, indeed; we depended very heavily on licensees to
19 comply with the regulations and comply with the
20 commitments that they make to us.

21 Q I think my question was phrased more in terms
22 of self-policing, that you depend upon the licensees to
23 inspect themselves to a great extent and find things that
24 are wrong since you don't have the staff or the person
25 hours to do that.

1 MR. PIRFO: I think the witness has answered
2 that question.

3 MR. SINKIN: The witness answered in terms of
4 compliance; we expect to comply. I'm asking in terms of
5 evaluating their own work, self policing.

6 A We require the licensee to have a good strong
7 QA program and the QA program will consist of audits of
8 the activities, quality control inspections of work in
9 progress at the appropriate critical points, yes, all
10 those kinds, the design verifications process that's
11 called criterion 3 is the similar kind of thing for
12 design.

13 Q (By Mr. Sinkin) I guess what I'm looking at is
14 if you have a third party review that specifically says
15 that it's purpose is to assess the technical adequacy of
16 the design of the project, whether that review has a
17 qualitatively different aspect to it than other third
18 party kind of studies of management, that sort of thing,
19 because they're actually looking at the technical
20 adequacy of the design. Does that suggest to you
21 something qualitatively different from other third party
22 reviews?

23 MR. PIRFO: Objection, that I question is so
24 vague, I can't -- I can't believe it was propounded. I
25 mean, what does that mean?

1 Q (By Mr. Sinkin) Well, you've talked about
2 third party reviews of construction and management
3 effectiveness in your testimony.

4 A Uh-huh.

5 Q The Quadrex review is identified as a an
6 assessment of the technical adequacy of the design;
7 whether that is qualitatively different than what you are
8 describing as third party reviews of construction and
9 management effectiveness.

10 MR. GUTTERMAN: Is this in the question of the
11 chilling effect sentence; are you getting at was Quadrex
12 different from that?

13 MR. SINKIN: I'm on the same paragraph, that's
14 where the testimony is.

15 MR. PIRFO: I don't see that question as being
16 much less vague, but I'll allow the witness to answer it.

17 A (By Mr. Johnson) First I have to question
18 whether it's a comprehensive review of the technical
19 adequacy. It's certainly an audit of the engineering
20 function that was going on. And yes indeed it's a third
21 party review.

22 It attempted, with whatever success, it
23 attempted to probe the process for engineering design
24 that was being used by Brown & Root, and has all those
25 aspects of any of the other third party reviews that

1 licensee might bring in, utility might bring in a company
2 to audit a term as vague as management controls, you
3 know, at an operating plant. This is a similar kind of
4 thing.

5 Q Mr. Taylor, turning in your testimony to -- I'm
6 just trying to see which item you're addressing.

7 All right. You're addressing, at page 3, you
8 begin addressing generic finding 3.1-A, and on page 5,
9 answer 13, you evaluate the reportability under 50.55(e).

10 By the way, I assume that when use the phrase
11 reported under 50.55(e), as that phrase is used in
12 question 13, that you understand that to refer to
13 potentially reportable as the analysis is actually being
14 done. Is that correct?

15 A (By Mr. Taylor) I think my answer reflects
16 that.

17 Q Yes. When you say the complete lack of factual
18 data upon which to make an assessment, are you referring
19 to the data that was available to the Houston Lighting &
20 Power review team on May the 8th, 1981, or the data that
21 you could perceive from your own review?

22 A The data I perceived from my own review.

23 Q Thank you.

24 MR. PIRFO: May I get a --

25 Q (By Mr. Sinkin) In answer 20, you're reviewing

1 and evaluating items in generic finding 3.1(b), and in
2 answer 20, you're talking about design verified
3 calculations with a higher error rate should be
4 encountered, and you give your evaluation of that
5 finding.

6 The last sentence says the fact that the
7 Quadrex finding states that there is an excessive error
8 rate does not constitute a violation. I guess my
9 question is: Does not constitute a violation of what?

10 A (By Mr. Taylor) I'm referring in my
11 terminology of violation to our terminology of violation
12 within the staff, and that's to Appendix B.

13 Q If the staff went into audit an engineering
14 program, and found an excessively, in their view, error
15 rate in verified design calculations, they would not
16 write up a violation for that?

17 A Yes, they would.

18 Q They would write up a violation?

19 A But done differently, sir.

20 Q How would it be done?

21 A It would be set out in terms of specificity,
22 this calculation, this error, spell it out in terms of
23 given the formula if necessary that has the error in it,
24 the assumption that was obviously incorrect.

25 Q So the problem with the Quadrex finding is that

1 it does not provide you enough detail to know whether
2 there's a violation or not?

3 A That's correct.

4 Q If you were faced with that situation as a
5 quality assurance manager at a nuclear plant, you had
6 this finding, you didn't have enough information to know
7 exactly how serious it was or what level of -- what they
8 were using as a baseline to measure excessive, would you
9 consider that you had a potentially reportable finding
10 pursuant to to 50.55(e)?

11 MR. PIRFO: I object again as this is pure
12 speculation.

13 MR. GUTTERMAN: It's answered.

14 MR. PIRFO: Before I move to strike the answer --
15 solve that problem. I move to strike the answer and
16 object to the question because he's simply asking him to
17 speculate. He cannot place himself in the position of a
18 quality assurance manager and it's immaterial. He's here
19 to testify as to how the staff viewed it at that point.

20 MR. SINKIN: Let me try it differently. I'll
21 withdraw the question and try it differently.

22 Q (By Mr. Sinkin) If you were doing an
23 inspection and you found that a quality assurance manager
24 had been informed that there was an excessively high
25 error rate in the calculations being performed by a given

1 design, particularly in verified calculations, there was
2 an excessively high error rate; and when informed of that
3 fact, the inspector, the quality assurance manager did
4 not file a potentially notifiable finding with the NRC,
5 would you cite that inspector for a violation of
6 50.55(e)?

7 A (By Mr. Taylor) I couldn't.

8 Q And why not?

9 A It's not possible in our regulation to issue a
10 violation for failure to issue a potential 50.55(e).

11 A (By Mr. Johnson) I think it goes beyond that
12 and let me add to it. I definitely see what you're
13 trying to get at, again. Let us head back to the
14 definition of 50.55(e).

15 Did those errors in those calculations cause a
16 deficiency which down the road are going to lead to those
17 conditions that are defined in the first paragraph,
18 something that adversely effects the safe operation of
19 the plant. I have to go out and I have to be able to
20 touch something in the plant or touch something that was
21 left out of the plant through that design error that is
22 going to cause a safety system to operate -- to not
23 operate in the manner which was intended or not operate
24 at all.

25 I'll add something to that, which I think I've

1 discussed before. If I find that there are those design
2 errors which could have led, a design error, some design
3 error, which could have led to an impact on a safety
4 system and I trace that back to a flaw in the process and
5 I see that that flaw is such that it could lead to a
6 large number of deficiencies, then yes, then we go back
7 and we say, "Do I have a QA breakdown?" And that's the
8 possibility.

9 And that's the reason it's written that way,
10 you start with a hardware deficiency, does that
11 deficiency have an impact on safe operation of the plant,
12 where did that deficiency come from. And what is the
13 underlying cause for that deficiency. And that's what
14 the NRC wants to know about.

15 Q But if the deficiency is never reported to the
16 NRC as a potentially reportable deficiency, how will the
17 NRC ever know about it?

18 A And I'd like to address very specifically this,
19 I think it's a very important concept. Potentially
20 reportable items are not part of the reporting
21 requirement. The potentially reportable item was added
22 in the guidance of April 1st, 1980 for the first time, it
23 was introduced; the historical perspective for that was
24 it is very, very difficult to determine what is -- should
25 be properly reportable and what should not.

1 It is recognized that there is a natural
2 reluctance on the part of utilities to put themselves on
3 report in front of the NRC. "Here I have sinned, I have
4 created this deficiency which is reportable." They would
5 therefore like to take as much time as they could to
6 evaluate it to be able to say, "Yeah, I've really looked
7 at this thing and know it doesn't meet the requirements;
8 that does not meet the NRC's need for information."

9 Consequently, in this 1980 guidance it was
10 introduced the concept of the potentially reportable
11 item. We were thereby giving the licensees an easy
12 mechanism to meet the requirements, the very difficult to
13 understand requirements of 10 CFR 50.55(e) which they
14 could by making the potentially reportable item, satisfy
15 the reporting requirement, finish their evaluation, come
16 back with a simple letter after the facts and say, "We've
17 evaluated it and it's not truly reportable, so with
18 withdraw our report."

19 The NRC meanwhile had the information. Some of
20 those we recognize, some of the total family of items
21 which were going to be potentially reportable, we
22 recognized were subsequently going to be withdrawn. We
23 decided that that was a -- that's worthwhile expense at
24 the -- because on the other hand, we were gaining early
25 indication of problems; 50.55(e) talks about the biggies

1 and we recognize we wanted to create an environment where
2 licensees would report biggies and some that weren't so
3 big and we would sort those out down the road.

4 In the meantime, we had captured all the ones
5 that were going to be ultimately reportable. As I've
6 indicated in my testimony, the typical nuclear power
7 plant under construction will end up actually reporting,
8 of all of the potentially reportable items, actually
9 reporting somewhere between one third and two third of
10 those items.

11 Q Let me stop you on that last sentence. They
12 will end up reporting one third or two thirds?

13 A Reporting under 50.55(e), one third to two
14 thirds of all those things that they raised, they pick
15 than the telephone and they call the NRC office about.

16 Q I got you.

17 A So the mere fact the licensee picks up the
18 phone, calls the NRC office and says, "I have a
19 potentially reportable item." And may two months later
20 get the engineering report from whatever source, whether
21 it's from Bechtel or whether it's from an another end
22 agency, from his own engineering firm and it says here's
23 the evaluation, it's not reportable. It never was
24 reportable under 50.55(e), a potential report did not
25 have to be made, because, you know, just did not have to

1 be made at that time, even though he may have chosen to
2 have made it.

3 Q I understand. Let me give you a hypothetical
4 situation. The Applicant finds something that they
5 decide needs to be evaluated for potential reportability,
6 it meets their understanding of the NRC guidance on
7 potential reportability; they don't tell you about it.

8 But they evaluate it, they spend 30 days
9 looking at it, maybe they spend 60 days looking at it and
10 at the end of that time, they decide they don't really
11 have a reportable item. On the 61st day your inspectors
12 discover their process is taking place. Is there a
13 violation?

14 A (By Mr. Johnson) No, there's no violation. In
15 general there's no violation. We may -- okay, and I'll
16 refer you to the guidance, April 1st guidance, there's a --

17 MR. PIRFO: Is that staff Exhibit 137?

18 THE WITNESS: I'm sorry, yes, it is.

19 MR. PIRFO: Yours may not be numbered.

20 A (By Mr. Johnson) Page 8, paragraph 7,
21 enforcement, bottom paragraph, another aspect of this --
22 see you haven't really completed the sentence, but it's
23 an important point I want to bring it out.

24 What you completed was if the -- what you
25 didn't complete was -- you should have said if the

1 inspector feels that it's a reportable item would he then
2 cite the licensee.

3 Q No, sir. That wasn't the question.

4 A Okay, then the answer is no, you would not cite
5 them.

6 Now, I would like to continue, though, and I
7 think the Board would ask the same question and that's
8 why I'll just provide the information now.

9 Q Excuse me, if it's not a question I ask, you
10 may wait for someone else to ask it.

11 JUDGE BECHHOEFER: I think it might be
12 desirable so --

13 MR. SINKIN: Go for it.

14 A It seems to flow with the thought and if we're
15 going to loose it later on.

16 JUDGE BECHHOEFER: I'd rather have it here.

17 A (By Mr. Johnson) This part of the guidance
18 deals specifically with those cases where an inspector
19 may pick up something that says, "Gee, I think this is
20 reportable. It looks like it meets all the requirements
21 of 50.55(e)." You know, if the licensee has indeed made
22 a good faith effort, done the evaluation, done his
23 analysis followed his procedures, et cetera, he probably
24 has satisfied as this paragraph points out, satisfied the
25 reporting requirements.

1 And then it goes on: Challenge maybe valid,
2 and then it gives seven or so conditions where you can
3 make a challenge; the bottom line on page 9 talks about
4 getting management involved, and if this non-reported
5 item is part of a pattern of avoidance of reporting
6 through superficial evaluations and what not, if it fits
7 in with the picture that the licensee is trying to avoid
8 reporting things, then we go in and we take strong
9 escalated enforcement action.

10 A (By Mr. Heishman) Mr. Chairman, I would like
11 to add one more thought to that while we're talking about
12 this subject. This whole guidance is predicated and I
13 think I touched on it earlier from my testimony, it's
14 predicated on the fact that we're going to have people in
15 the field using this guidance that are qualified people,
16 they're good inspectors, but they're not going to be
17 using it in a vacuum, they're going to have their own
18 management, they're going to have consultation with,
19 heaven forbid, people in Washington, perhaps, like
20 myself; we're going to collectively try to look at these
21 things that are brought up and we're going to apply
22 hopefully reasoned judgment to them so that we have a
23 consistent policy that is applied across the board and
24 that we are in reality working towards our ultimate goal
25 of health and safety of the public.

1 So it is something that is trying to provide to
2 people who really are qualified to do a job and it is
3 written on the basis of those kind of people using it.
4 So it's set in that setting.

5 MR. SINKIN: Did you have further questions,
6 Mr. Chairman?

7 JUDGE BECHHOEFER: I was debating whether to
8 ask another one now, but I guess I could leave it until
9 later.

10 Q (By Mr. Sinkin) Mr. Taylor, in your testimony
11 at page 14, answer 34, I guess my question is when you
12 say in the other case, a deliberate but not necessarily
13 incorrect perception, what it is you're referring to.

14 A (By Mr. Taylor) The answer in A-33.

15 Q Well, you find the HVAC to be an error in
16 engineering judgment. The other problem being discussed
17 if I'm correct is the essential cooling water pond.

18 A No, I don't believe you're correct.

19 Q I'm trying to get to where -- I'm sorry, if I'm
20 confused. I just didn't quite follow where you went to
21 next?

22 A May I help?

23 Q Please.

24 A I think 3.1 C, dealt with the interaction
25 between postulated line cracks and breaks in piping,

1 versus HVAC.

2 Q So you're saying that the absence of postulated
3 line changes and breaks outside containment is a
4 deliberate but not necessarily incorrect perception?

5 A Yes. That's what I said.

6 Q The perception that such an analysis doesn't
7 have to be done is a not an incorrect perception?

8 A It seems that I might have answered that
9 question in A 33, sir.

10 Q I'm just trying to understand; I'm not trying
11 to be argumentative, Mr. Taylor. I'm really just trying
12 to understand what it is you're saying. So what you're
13 saying is that Brown & Root was using the design basis
14 from the '73 to '75 time period when the absence of
15 postulated line cracks and breaks -- well, it's not a
16 matter of concern, because you can avoid doing them?

17 A I think what I'm trying to say is that the
18 industry in the period was he involving very rapidly and
19 that in the time frame that the STP station was docketed,
20 the growing concern for -- for line breaks outside of
21 containment was just beginning.

22 And there's nothing in our rules that say once
23 docketed, that you have to continually move with the
24 evolution of the industry, unless we tell you to. And
25 that's on a case-by-case basis.

1 Q So in May of 1981, there was no requirement for
2 the South Texas Nuclear Project to evaluate postulated
3 line breaks and cracks outside containment?

4 A I don't believe we had directed them to
5 consider it.

6 Q When you say that it's a deliberate perception,
7 are you implying that the engineers knew it wasn't
8 required and that's why they didn't do it?

9 A I don't think I really mean that quite that
10 seriously. What I'm trying to say is that the -- I think
11 Brown & Root time framed themselves to do their
12 engineering work that basically that they'd committed to
13 do, which was whether the station was docketed.

14 And to change in mid-stream on a continually
15 evolutionary basis probably would not be conducive to
16 production of engineering information.

17 Q Let me just check a question with you, Mr.
18 Taylor. I think it's not appropriately worded but I
19 think you were answering it appropriately. On page 20,
20 question 55, the question states if either the failure to
21 have one thing or the failure to do another thing
22 required by Appendix B, I don't think there are any
23 failures required by Appendix B. Are there?

24 A (By Mr. Taylor) No.

25 Q Okay.

1 A That wasn't what I was referring to, obviously.

2 Q I assumed you were not answering it as written
3 that way. I guess it could be corrected, instead of
4 required by, in violation of?

5 A I guess it could be read that way.

6 Q Or contrary to.

7 A It could be read that way.

8 A (By Mr. Johnson) That showed how it's read.

9 JUDGE BECHHOEFER: Which words would you
10 prefer?

11 A (By Mr. Johnson) Contrary to --

12 A (By Mr. Taylor) Let's change "required by" to
13 "contrary to."

14 MR. PIRFO: Mr. Chairman, it's been our
15 tradition to take a break at 5:00 o'clock and since there
16 seems to be a lot of dead space to look at each one, might
17 this be an appropriate time to give Mr. Sinkin some time?

18 MR. SINKIN: I would just tell the Board that
19 it's my eliminating as many questions as I can.

20 MR. PIRFO: I don't say that disparagingly just
21 that it might be better to get a break now and --

22 MR. HEISHMAN: Take time to eliminate more
23 questions.

24 MR. PIRFO: Yeah, more time to eliminate more
25 questions.

1 (Brief recess taken.)

2 JUDGE BECHHOEFER: Mr. Sinkin?

3 MR. SINKIN: Thank you.

4 JUDGE BECHHOEFER: Back on the record.

5 Q (By Mr. Sinkin) Mr. Taylor, on page 34 of
6 your testimony, answer 95. The next to the last
7 sentence, you state that "It would seem prudent to have
8 the verification accomplished prior to releasing the
9 design for use, but many factors bear upon this, such as
10 that the risk of using an unverified design might well
11 be less than the benefits."

12 Would one factor in your analysis there be the
13 experience of the design and engineering group?

14 A (By Mr. Taylor) That wasn't a factor that I
15 was considering.

16 Q If you had knowledge that the design and
17 engineering group performing nuclear work lacked
18 experience in that area, would that change your
19 evaluation of the risk of using unverified designs?

20 A Yes, it could.

21 Q And if there was high turnover in that group,
22 would that also affect your analysis?

23 A I don't know that the turnover, per se, would
24 bother me.

25 Q Well, just so the record is clear, if you had

1 an inexperienced group, the risk would be higher?

2 A That's correct.

3 Q Page 37 of your testimony, answer 104. Do you
4 know whether HL&P personnel on May 8th, 1981, were
5 familiar with Brown & Root's handling of the missiles in
6 actual design and were therefore not concerned with the
7 Quadrex comment?

8 A I have no knowledge.

9 MR. SINKIN: Mr. Chairman, on the basis of
10 that, I would move to strike answer 104 as pure
11 speculation on the part of the witness.

12 MR. PIRFO: Mr. Chairman, I think that portion
13 of the answer simply indicates that there could have
14 been a lot of reasons for this and this may have been
15 one of the reasons. It's not absolutely tied to that
16 particular reason.

17 MR. GUTTERMAN: Mr. Chairman, I would add to
18 that that that statement in Mr. Taylor's testimony says
19 if that were true, that would be a reason for not
20 reporting. I believe there's evidence in the record
21 that indicates that is true. So, that makes that a very
22 probative statement that I can't see any reason to
23 strike.

24 MR. SINKIN: Well, we can argue about what the
25 record says on this point, but it's clear that in Mr.

1 Taylor's testimony this is pure speculation on his
2 part.

3 MR. GUTTERMAN: Mr. Chairman, it is not
4 speculation. It is a statement that if a certain fact
5 were true, that would influence his judgment. That's
6 not speculation, that's a statement of fact.

7 MR. PIRFO: I might add the motion to strike,
8 as I understand it, obviously would only apply to the
9 second sentence, not the "no".

10 MR. SINKIN: That's given as the reason for
11 the "no".

12 MR. PIRFO: It's not given for the reason. It
13 may well have been. It's not the only reason that
14 exists for the "no".

15 MR. SINKIN: Well, in this particular instance
16 it certainly contrasts with his other "no's" that don't
17 give a particular reason. This one does give a
18 particular reason, so it seemed to me this one was tied
19 directly to what the "no" was.

20 JUDGE BECHHOEFER: Mr. Taylor, in your answer
21 104, were you just speculating or did you have some
22 reason to believe that what you were saying may have
23 been -- might have been?

24 MR. TAYLOR: Sir, I've been around
25 construction substantially for 25 years, fifteen of it,

1 sixteen of it in the nuclear field. I have yet to see a
2 major architect engineer or a major utility with quite
3 experienced people at their leadership living in a
4 vacuum. And this is basically a strong hypothesis that
5 they are not in a vacuum, that they have knowledge that
6 transcends what Quadrex is saying.

7 MR. SINKIN: Mr. Chairman, if I might, I --

8 JUDGE BECHHOEFER: Well, let the witness
9 finish.

10 MR. SINKIN: I thought he was finished.

11 MR. TAYLOR: That's the basis of the
12 statement.

13 MR. SINKIN: The response I was going to make
14 is that if that question had been asked by anyone but
15 the Chair, I would have said asked and answered. I did
16 ask him if he was basing that on the knowledge that
17 Houston Lighting & Power had on May the 8th and he had
18 no knowledge of what they knew on May the 8th. So, it
19 makes it mere speculation.

20 JUDGE SHON: Mr. Taylor, is the fact that you
21 answered no to that question entirely based on that
22 second sentence, that following sentence, or do you have
23 any other reasons for thinking that?

24 MR. TAYLOR: Well, the second sentence really
25 deals with my perception that they are not living in a

1 vacuum, that they are not absent other knowledge and
2 that prefaces my "no".

3 MR. PIRFO: If I may, Mr. Chairman, it's
4 unclear to me, I haven't spoken to them, but simply from
5 discussions that are occurring on my panel that Mr.
6 Taylor may have misunderstood Judge Shon's last
7 question.

8 JUDGE SHON: You want to elaborate on my last
9 question?

10 MR. TAYLOR: I do have a little bit. The "no"
11 is really predicated on the answer in 103 which says
12 it's an extremely close call, that I'm exercising
13 basically a very low threshold of reportability. I
14 wouldn't want to arrive at a conclusion therefore that
15 it indicated a lack of candor or truthfulness on the
16 part of the management of the utility.

17 JUDGE SHON: So, then your answer would still
18 be no, even if that sentence following the "no" were
19 struck; is that correct?

20 MR. TAYLOR: That's correct. That is
21 correct.

22 JUDGE BECHHOEFER: I think we will strike the
23 sentence, not the "no" part, but the rest of it.

24 MR. SINKIN: Mr. Chairman, I'm distributing
25 what I ask be marked as CCANP 134.

1 (CCANP Exhibit No. 134 marked for
2 identification.)

3 Q (By Mr. Sinkin) Mr. Johnson, I think I'll
4 address this question to you. If you turn to page 7 --
5 actually, let's start with page 3. The performance
6 analysis section indicates that the SALP Board obtained
7 assessment data applicable to the appraisal period July
8 1, 1981 to June 30th, 1981. Is that the correct period
9 for this SALP analysis?

10 A (By Mr. Johnson) Yes, sir. Apparently that's
11 the same period that's referred to in the cover letter
12 for that report 81-37.

13 Q Turning to page 7 --

14 MR. SINKIN: Is there a problem, Mr. Chairman?

15 JUDGE BECHHOEFER: Mr. Sinkin, I think
16 somebody should ask the panel first to indicate their
17 familiarity with this report or whether they have ever
18 seen it or reviewed it.

19 MR. SINKIN: That was going to be my first
20 question of Mr. Johnson.

21 JUDGE BECHHOEFER: Okay. Fine.

22 Q (By Mr. Sinkin) Are you familiar with this
23 SALP report, Mr. Johnson?

24 A (By Mr. Johnson) Only that it exists. I was
25 not a member of the board that participated in the

1 assessment process or, as a matter of fact, in any of
2 the data that went into this assessment.

3 Q Any of the other panel familiar with this SALP
4 report?

5 A (By Mr. Heishman) No, sir.

6 A (By Mr. Taylor) No.

7 A (By Mr. Constable) No.

8 MR. SINKIN: Then I guess we'll save it for
9 the next panel.

10 We have a problem, Mr. Chairman. The reason I
11 brought it up in this panel is --

12 JUDGE BECHHOEFER: You may want to ask some
13 questions about it without trying to introduce it at
14 this time.

15 MR. SINKIN: Okay. Well, let me try.

16 JUDGE BECHHOEFER: If they are able to
17 answer.

18 MR. SINKIN: Let me try.

19 JUDGE BECHHOEFER: It is an official NRC
20 document.

21 MR. SINKIN: I understand.

22 Q (By Mr. Sinkin) At the bottom of page 7, it
23 states that "A trend was noted relative to the
24 deficiencies reported; that is, 7 of 11 were design
25 problems."

1 Can you identify for me the seven of the
2 eleven there that are design problems?

3 A (By Mr. Johnson) No, sir, I think you ought
4 to ask Mr. Phillips that question.

5 Q All right.

6 A I think Mr. Phillips participated in --

7 Q I'm almost certain he did.

8 A He did. He should be able to give you a
9 satisfactory answer to that.

10 MR. SINKIN: I think I'll just save my
11 questions on this for Mr. Phillips, Mr. Chairman.

12 JUDGE BECHHOEFER: Well, let's leave it marked
13 with the number you gave it.

14 MR. SINKIN: Yes, please.

15 Q (By Mr. Sinkin) As of May 1981, I should have
16 put this in the record earlier, but was Houston Lighting
17 & Power committed to implementing ANSI N45.2.11?

18 A (By Mr. Taylor) Say that again, please?

19 Q Was Houston Lighting & Power committed to
20 implementing ANSI N45.2.11?

21 A I don't know.

22 Q Anyone on this panel know?

23 A (By Mr. Heishman) I don't know.

24 A (By Mr. Constable) I don't recall being asked
25 to look that up.

1 A (By Mr. Johnson) No, I can't give you an
2 answer on that. We used it because it's the common
3 standard that everybody uses. I'd have to do a docket
4 file search to determine that.

5 Q So, Mr. Taylor, you simply used it in your
6 testimony because it would be common for them to have
7 committed to doing it, but you don't know for a fact
8 they were committed?

9 A (By Mr. Taylor) It didn't really matter to me
10 whether they were or were not. That wasn't the purpose
11 of my use of the document. The purpose of the document,
12 N45.2.11, is that it is the common interpretation of
13 criterion 3 and a couple of other criterion of Appendix
14 B that have been generally used throughout the
15 industry. It simply puts meat on the bare bones of
16 Appendix B.

17 Q Maybe I do need to clarify one thing. Mr.
18 Johnson, when you were answering questions relative to
19 this ANSI standard -- well, no, let me ask a different
20 question.

21 Relative to 50.55(e), when you see the term
22 final design, how do you interpret that term? Does that
23 mean a design that has been through final design
24 verification?

25 A (By Mr. Johnson) I'll let Bob help me out.

1 Probably the easiest way is to -- to answer
2 that is to almost ask a question. Are you referring to
3 the final condition? Because one definition says that's
4 the final condition of the plant. We have now built it
5 and I have walked through and I have noted all the
6 changes in the as-built configuration. I've updated all
7 the drawings. That's the final design.

8 There would be another one that says here is a
9 relatively complete design that will need little
10 modification and it's ready to go for construction with
11 a little risk that there are going to be some major
12 changes to it.

13 Q Well, would a system design description that
14 was complete with no further work to be done on it be a
15 final design in the sense of 50.55(e)?

16 MR. GUTTERMAN: I'm getting confused. Are we
17 trying to interpret the section of 50.55(e) that's
18 (e)(ii), the significant deficiency? Final design as
19 released for construction?

20 MR. SINKIN: Yes.

21 MR. GUTTERMAN: That's the word final design
22 you're trying to get an interpretation of?

23 MR. SINKIN: Yes.

24 Q (By Mr. Sinkin) Let's be sure we were clear.
25 In 50.55(e), I think the only place the term appears as

1 final design is in section (ii).

2 A (By Mr. Johnson) Okay. Then that's as
3 approved and as released for construction in the time
4 frame of application of 1981. As released for
5 construction.

6 Q Now, do you include in that system design
7 descriptions?

8 A I'm going to defer this one to Mr. Taylor.

9 Q Okay.

10 A (By Mr. Taylor) System design descriptions,
11 as I understand them within the Brown & Root
12 terminology, would not be typically released for
13 construction. They have no value in the construction
14 field.

15 Q What about technical reference documents?

16 A Same thing.

17 Q Is it the NRC Staff's position that if HL&P
18 had turned the Quadrex report over to the NRC staff on
19 May 8th, 1981, that the Staff would have in turn
20 provided copies to the Licensing Board?

21 MR. PIRFO: Objection. That wouldn't have
22 been the Region's duty to do it, it would have been up
23 to the attorneys.

24 MR. GUTTERMAN: It's also outside the scope of
25 the direct, I believe, which only deals with 50.55(e), a

1 point that I believe CCANP established at the outset of
2 its cross-examination.

3 MR. PIRFO: These witnesses, it's just none of
4 their business. I mean, they wouldn't have known
5 whether we would have done it. I mean, there is no
6 position formulated on it, it's just --

7 Q (By Mr. Sinkin) Are there not requirements
8 that you implement regarding keeping licensing boards
9 informed of events of a project during a licensing
10 hearing?

11 MR. PIRFO: That is not a proper question to
12 this panel.

13 MR. SINKIN: This panel does not implement
14 those requirements?

15 MR. PIRFO: I don't know what you mean by
16 implementing those requirements. There are certain
17 requirements and obligations that the Staff has to the
18 Licensing Board and it's up to the attorneys to fulfill
19 those obligations. And to the extent we need to rely on
20 Staff personnel, our staff keeps the attorneys
21 informed. The question went to whether it was the
22 Staff's position that this would have been turned over
23 to the Licensing Board.

24 Q (By Mr. Sinkin) I guess then the better
25 question is would you have taken the Quadrex report to

1 the attorney for the NRC and suggested that it might be
2 something the Licensing Board should see?

3 MR. PIRFO: I'll object to that as well. I
4 mean, he's asking them to speculate. It's pure
5 speculation. How can they go back with the hindsight of
6 four years and say if you were in this situation four
7 years ago, would you have done that?

8 MR. SINKIN: Isn't that precisely what Mr.
9 Taylor has done?

10 MR. PIRFO: Mr. Taylor has not done that. He
11 talked about reportability under 50.55(e). I don't see
12 any mention of McGuire obligations or anything else
13 about that in Mr. Taylor's testimony. It's outside the
14 scope of the direct testimony of all these witnesses
15 entirely.

16 MR. SINKIN: Well, I don't see that there is
17 any -- well, maybe the Staff is just not addressing the
18 contention that's in the proceeding related to McGuire.

19 MR. PIRFO: Yeah, that's correct. We've taken
20 a position on McGuire. We're not presenting -- we have
21 viewed it as a legal question and in our submissions to
22 the Board we have taken our position on that. We're not
23 offering evidence on McGuire.

24 JUDGE BECHHOEFER: They agree.

25 MR. SINKIN: Okay. I'll withdraw the

1 question.

2 JUDGE BECHHOEFER: Okay.

3 Q (By Mr. Sinkin) In response to the Quadrex
4 report when it finally did come to the attention fully
5 of the Nuclear Regulatory Commission, an evaluation was
6 begun that resulted in NUREG 0948. And my question is
7 why did the NRC Staff make it a point to do their own
8 evaluation of the disposition of the Quadrex findings?

9 MR. PIRFO: I'm not sure these gentlemen were
10 involved in the decision to generate NUREG 0948.

11 JUDGE BECHHOEFER: Well, I think if they know,
12 they can perhaps answer.

13 MR. SINKIN: Well, I'm a little disturbed,
14 there, Chairman --

15 MR. PIRFO: If they know the answer, they're
16 free to answer.

17 JUDGE BECHHOEFER: If they don't, they're free
18 to state that.

19 MR. SINKIN: At the same time --

20 JUDGE BECHHOEFER: We're allowing your
21 question. Don't argue.

22 MR. SINKIN: I won't argue.

23 JUDGE BECHHOEFER: If they know.

24 A (By Mr. Johnson) I'm not sure I know the
25 rationale that went into it, but it was a very

1 significant document. It was receiving a lot of
2 attention. It demanded answers. So, we conducted --
3 you know, if I had been a manager, that's exactly what I
4 would have done, but again that's speculation.

5 I don't know the underlying rationale. It did
6 happen, you know, it's a fait accompli.

7 Q (By Mr. Sinkin) Any of the rest of the panel
8 know why it was done?

9 A (By Mr. Heishman) I can answer from the
10 standpoint that I was asked to supply an individual to
11 be a part of the task force which ultimately did the
12 inspection and created that document. From that
13 standpoint, my involvement in it was that here was a
14 report which the utility had commissioned to determine
15 the status of the engineering, as I understood it or as
16 it was described for me at that time, and, as such, the
17 findings were great in number and the Commission needed
18 to be aware of what was there and how it was being
19 handled such that they could decide whether or not there
20 was any activity or any actions required. And on that
21 basis I was asked to provide a senior individual under
22 my supervision at the time to be a part of that
23 organization, which I did.

24 Q How did you understand the term status of
25 engineering?

1 A That was the term that was used and I guess I
2 didn't question it, nor did I have any -- I didn't give
3 it a great deal of thought. My only concern, very
4 frankly, with that issue at that time was who was I
5 going to provide and did I -- where was I going to get
6 that individual, which is a normal response for a
7 manager.

8 So, I submit to you that's basically the
9 involvement that I had. I did choose Mr. Oberg and he
10 was provided -- while he was physically located in the
11 region, he was a part of the performance appraisal team
12 at that point in time and he was provided as an
13 individual to work on that task force. And that's the
14 extent of my knowledge about what was there.

15 I'm probably the only individual in the room
16 that has not read that report.

17 Q I understand.

18 Are you aware of whether there was a concern
19 that the Quadrex report might represent a quality
20 assurance breakdown?

21 A I am not --

22 MR. PIRFO: I'll object. I think Mr. Heishman
23 has given the parameters of what his concerns were and
24 what his involvement was.

25 MR. SINKIN: He may not have told everything

1 he knew in response to my question.

2 MR. PIRFO: I'll withdraw my objection.

3 JUDGE BECHHOEFER: I guess you can answer.

4 A (By Mr. Heishman) I've told you everything I
5 know.

6 Q (By Mr. Sinkin) Okay.

7 A I'm sorry.

8 Q That's fine.

9 Mr. Johnson, I guess I'll start this with
10 you. Basically the position this panel has taken is
11 that there was no need for the Applicants to provide the
12 Quadrex report to the Nuclear Regulatory Commission,
13 turn the report over to the Staff. And --

14 JUDGE BECHHOEFER: Are you saying as a whole
15 now?

16 MR. SINKIN: As a whole, turn the report over
17 to the Staff.

18 Q (By Mr. Sinkin) And if the licensing Board
19 agrees with you, they will so rule in the decision and
20 then there will be a precedent within the NRC that if
21 you are an Applicant and you receive a report like the
22 Quadrex report, there is no need for you to turn it over
23 to the NRC Staff.

24 Are you completely comfortable with that as an
25 ultimate outcome of your testimony?

1 MR. PIRFO: I object to that. I don't know
2 what the question was intended to, you know --

3 MR. GUTTERMAN: I object to it. It's just an
4 argumentative question.

5 Q (By Mr. Sinkin) Do you have any discomfort in
6 saying, setting as a policy that Applicants who receive
7 a report like the Quadrex report should not turn it over
8 to the NRC Staff?

9 MR. GUTTERMAN: Mr. Chairman --

10 MR. PIRFO: That's the same question.

11 MR. REIS: It's very vague.

12 JUDGE BECHHOEFER: I might say that given the
13 limitation of their testimony to 50.55(e), the question
14 itself isn't necessarily accurate.

15 Q (By Mr. Sinkin) Well, do you feel -- let me
16 try a different question. Do you feel that there were
17 grounds other than 50.55(e) on which the report should
18 have been turned over to the NRC Staff?

19 MR. PIRFO: I'll object. What is that -- what
20 other grounds were there? I mean, 50.55(e) has been
21 eliminated by the question. McGuire the Staff has taken
22 a position on. I don't understand the question.

23 MR. SINKIN: Were there other grounds other
24 than 50.55(e) that he believes would have led to the
25 report being turned over to the NRC Staff?

1 MR. PIRFO: Those other grounds are not in
2 issue. If that's the question, then the answer is
3 irrelevant as far as I can see.

4 Now, if the Board -- if it will save time,
5 I'll withdraw the objection. But I'm not -- I have no
6 concern about the answer.

7 MR. SINKIN: The objection was withdrawn, Mr.
8 Chairman.

9 MR. REIS: We don't know which question.

10 JUDGE BECHHOEFER: We were about to sustain
11 it.

12 MR. PIRFO: I'll reiterate it.

13 MR. SINKIN: I object, Mr. Chairman. I really
14 object. If the objection is withdrawn, there's no
15 reason for the Board to have issued a ruling.

16 MR. PIRFO: I said if it saves time. I was
17 under the impression it was --

18 JUDGE BECHHOEFER: We don't think these
19 witnesses can answer that.

20 MR. SINKIN: There is no other panel being
21 presented that's any better at answering this question
22 than this panel.

23 MR. PIRFO: That's the problem I have. Mr.
24 Sinkin keeps thinking that because the other party puts
25 on a witness, they're supposed to answer the questions

1 that he wants answered. Well, if that's the case, if he
2 needs answers to particular questions, he should put on
3 witnesses that are competent to answer the questions.

4 He cannot sit there in the Pollyanna belief
5 that other witnesses are going to answer his questions
6 exactly the way he wants them to be answered. That is
7 not an argument for propounding a question to this
8 panel.

9 MR. GUTTERMAN: Besides which, Mr. Chairman,
10 there are two issues regarding the reportability of this
11 report, the McGuire Rule question, 50.55(e). The
12 question has as its premise that you don't consider
13 either one. So, built into the question is a
14 proposition that he's asking for something immaterial
15 and on that grounds I think the question's improper.

16 JUDGE BECHHOEFER: I might add we already
17 ruled out Part 21 because of insofar as relevance, it
18 was duplicated. So, I think we will sustain -- well, we
19 will -- I don't know if we're sustaining the ruling. I
20 don't think the witnesses need or should answer that
21 question.

22 MR. SINKIN: That concludes my
23 cross-examination, Mr. Chairman.

24 JUDGE BECHHOEFER: We think we probably should
25 adjourn at this time and come back for a fairly short

1 session tomorrow.

2 Is the Applicant still about fifteen minutes?

3 MR. GUTTERMAN: About that, Mr. Chairman,
4 maybe plus or minus five minutes.

5 JUDGE BECHHOEFER: Ours could be about an
6 hour, but it will be a relatively short session I would
7 think. Maybe less than an hour.

8 MR. GUTTERMAN: That's fine with the
9 Applicants for adjourning.

10 JUDGE BECHHOEFER: So, we'll adjourn for the
11 day and we'll be back at 9:00 tomorrow.

12 (Hearing recessed at 5:45 p.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)

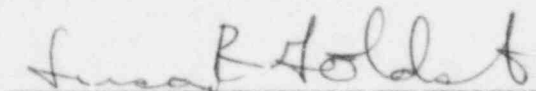
DOCKET NO.: STN 50-498-OL
STN 50-499-OL

PLACE: HOUSTON, TX

DATE: Thursday, August 8, 1985

were held as herein appears, and that this is the
original transcript thereof for the file of the United
States Nuclear Regulatory Commission.


R. Patrick Tate, CSR


Susan R. Goldstein, CSR

Official Reporters