

11

ORIGINAL UNITED STATES NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:

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

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

LOCATION: BAY CITY, TEXAS

PAGES: 11730 - 11883

DATE: SATURDAY, JULY 13, 1985

TR-010/1

ACE-FEDERAL REPORTERS, INC.

B507180250 B50713
PDR ADDCK 05000478
T PDR

Official Reporters
444 North Capitol Street
Washington, D.C. 20001
(202) 347-3700

NATIONWIDE COVERAGE

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

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

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

Matagorda County Courthouse
Courtroom No. 2
Bay City, Texas

Saturday, 13 July 1985

The hearing in the above-entitled matter was
convened, pursuant to adjournment, at 9:00 a.m.,

BEFORE:

JUDGE CHARLES BECHHOEFER, Chairman,
Atomic Safety and Licensing Board.
JUDGE JAMES C. LAMB, Member,
Atomic Safety and Licensing Board.

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 JACK R. NEWMAN, Esq.,

8 ALVIN GUTTERMAN, Esq.,

9 DONALD J. SILVERMAN, Esq.,

10 Newman & Holtzinger,

11 Washington, D.C.
12

13
14 On behalf of the Nuclear Regulatory Commission Staff:

15 EDWIN J. REIS, Esq.,

16 ORESTE RUSS PIRFO, Esq.,

17 Office of the Executive Legal Director
18

19
20 On behalf of the Intervenor:

21 LANNY ALAN SINKIN,

22 3022 Porter St. N.W., #304

23 Washington, D.C. 20008

24 Representative for Citizens Concerned About
25 Nuclear Power.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CONTENTS

WITNESSES: DIRECT CROSS BOARD REDIRECT RECROSS

JEROME H. GOLBERG - 11733 - - -

EXHIBITS: For Id. In Evid

CCANP 75 11789

1 JUDGE BECHHOEFER: Good morning, ladies and
2 gentlemen. In the -- on the divider between the front
3 and back of the room, there is a pad of paper for anyone
4 who wishes to sign up for limited appearance statement
5 for this afternoon. We've asked for both names and
6 addresses so that eventually when and if we issue an
7 initial decision, it will get sent to the people who make
8 the statements as well as others, like the parties. So
9 anyone who wishes to sign up may do so.

10 Are there any preliminary matters before we
11 resume with Mr. Goldberg? I might say that we have taken
12 care of things like checking out of our hotels so that we
13 can run somewhat later than 12:00, if need be.

14 Okay, Mr. Sinkin.

15 MR. SINKIN: Thank you.

16 JEROME H. GOLDBERG
17 testified further upon his oath as follows:

18 DIRECT EXAMINATION CONTINUED

19 By Mr. Sinkin:

20 Q Good morning, Mr. Goldberg.

21 A Good morning.

22 Q You testified yesterday that on May 7th when
23 you first saw the Quadrex report that it had a
24 significant impact on you. Did you, at that time,
25 consider whether you should turn the entire report over

1 to the NRC?

2 A You mean the instant I received the report and
3 looked at it for the first time?

4 Q At any time during that May 7th meeting, first
5 meeting review.

6 A I was strictly trying to understand the report.
7 So at that juncture, I was concentrating or hearing
8 Quadrex's presentation, paying attention to the
9 commentary from Brown & Root, and I was awaiting the
10 results of an evaluation that started that afternoon that
11 ran through the evening and continued in my office the
12 following day, before any decisions on reportability
13 could be made.

14 Q On May 8th, you had a meeting with Dr. Sumpter
15 and Mr. Robertson to discuss the Quadrex report. Is that
16 correct?

17 A That's my recollection. Not -- you said May
18 8th?

19 Q May 8th.

20 A Yes.

21 Q May 8th. And how long did the meeting of the
22 review team last?

23 A We started in my office at noontime, as far as
24 reviewing the input from Brown & Root. But we actually
25 had an earlier review that started in the morning and I

1 would estimate it was somewhere around 8:00 o'clock,
2 where we were going over matters prior to receiving input
3 from Brown & Root.

4 I think the meeting started at 8:00 and then at
5 noontime, as I recall. We got our input from Brown &
6 Root and the meeting continued until early evening to
7 something in the order of about 6:00, 6:30, at which time --
8 I think we were joined at about 6:00 p.m. by Mike Powell
9 who was the chairman of the incident review committee.

10 And I'd like to at least call attention to the
11 fact that I think this question came up as I was reading
12 PEP11 and talked about a nuclear safety -- nuclear safety
13 and licensing leader. And there was a principle engineer
14 in charge of nuclear safety and licensing by the name of
15 Jacobi. But he is not or was not the chairman of the
16 incident review committee. It was Mr. Powell. So I'd
17 like to correct that small confusion.

18 So around 6:00, Mr. Powell joined the group, as
19 I recollect, and I think he made contact with the NRC
20 regarding some matters of reportability sometime around
21 6:30 that evening.

22 Q Now, if I were to tell you that in your
23 deposition to the State of Texas, you had it at 6:30 and
24 7:00, would that --

25 A It's approximately that point in time. I think

1 I will be careful to use the word "approximately,"
2 because we're looking back almost five years ago and
3 these are recollections and they're not that precise.

4 Q Just to get it clear, Mr. Jacobi was a
5 licensing -- nuclear licensing engineer. Is that
6 correct?

7 A He was called a principle engineer. He is --
8 he had a supervisor role in the nuclear safety and
9 licensing group.

10 Q Well, let's talk about the first meeting at
11 8:00 o'clock. That's Dr. Sumpter and Mr. Robertson?

12 A That's correct.

13 Q And what is it you are discussing in that
14 meeting?

15 A We're starting to go over in our minds the
16 matters in the report and, I'm taking advantage of the
17 information that both Mr. Robertson and Dr. Sumpter
18 gathered in their participation in the review that took
19 place during the previous afternoon and evening, wherein
20 Brown & Root went about the task of reviewing each of the
21 most serious discipline findings for purposes of
22 responding to my letter requesting they identify any
23 matters that might constitute matters requiring
24 reportability to the Nuclear Regulatory Commission.

25 And we were, in effect, going over on a

1 preliminary basis their reflections on the activities of
2 that previous afternoon and evening.

3 Q And how did they characterize the Brown & Root
4 meeting to you? Was it a meeting in which a lot of
5 people were very upset? Was there a lot of discussion
6 going on, sharp discussion, or was it basically a
7 straightforward review with comments?

8 A It was my understanding that it was a fairly
9 orderly, technical review of the contents of a report. I
10 certainly don't recall any dialogue to suggest that it
11 was other than that.

12 Q And your meeting went from 8:00 o'clock up
13 until noon?

14 A Well, our meeting, of course, was pretty much
15 of a continuous nature, except prior to noontime, we were
16 working with the information that both Mr. Robertson and
17 Dr. Sumpter were reflecting on as far as their
18 participation the night before.

19 The one thing that they didn't know for sure
20 was whether or not there would be more than one
21 reportable deficiency which was the understanding that
22 they had developed from their activities the day before.
23 They weren't sure whether the final input from Brown &
24 Root would still contain the one deficiency that they
25 were aware of or whether it might contain others.

1 Q That was the HVAC deficiency?

2 A It was the HVAC deficiency.

3 Q During the period from the morning of May the
4 7th, at the time you were receiving the Quadrex report,
5 until the evening of May the 8th when the notifications
6 to the Nuclear Regulatory Commission are made, did you
7 have any discussions with any of the attorneys for
8 Houston Lighting & Power?

9 A Not that I can recall.

10 Q They were present in Houston at that time, is
11 that not correct?

12 A I'm not sure.

13 Q Well, we're talking about five days before the
14 Phase I hearings are to open?

15 A I have no personal recollection of whether they
16 were or they were not.

17 Q Well, after you made the notifications to the
18 NRC on May the 8th, between that time and the first day
19 of hearings, do you remember seeing the Houston Lighting
20 & Power attorneys in Houston?

21 A I recall, if my memory serves me, I thought I
22 had a dialogue with Mr. Newman. And I further recall
23 that the same question surfaced during my deposition with
24 the State of Texas, at which time Mr. Gutterman inquired,
25 "Would it surprise you if I mentioned that you had a

1 conversation with myself regarding the reportability?"
2 And I said, "No, that wouldn't surprise me."

3 For some reason, I thought I had a conversation
4 with Jack, but maybe it was with you.

5 I know that there was a question. "How did the
6 review go, were there any reportable deficiencies?"

7 Q So the question that you discussed was: How
8 did the review go and were there any reportable
9 deficiencies?

10 A There was a general inquiry about what were the
11 results of the review --

12 JUDGE BECHHOEFER: Being what period of time
13 was this? About when was this?

14 THE WITNESS: I believe, Mr. Chairman, that
15 could well have occurred within some few days after our
16 evaluation of Quadrex and prior to the start of the
17 hearings. There's not much of a time in there. I think
18 it's just somewhere in that window.

19 Q (By Mr. Sinkin) Did you convey to either Mr.
20 Newman or Mr. Gutterman, whoever it was you talked to or
21 both, the reaction you had had on May the 7th to the
22 report, that it was sort of a shocking report to you?

23 A No, because at the time, I'm sure I had any
24 conversations with one of those gentlemen, we had
25 completed the rather complete review that put things in a

1 considerably different perspective than one would get
2 when they first open up that report.

3 Q Did you convey to them that it was the kind of
4 report that if you read without any background
5 information, you would be shocked, but that if you
6 evaluated it, you'd feel better about it?

7 A I don't believe so, no.

8 Q How did you characterize the review to them?

9 A That we had tremendous amount of work that lie
10 ahead in completing the engineering for the South Texas
11 Project.

12 Q Did you convey that in terms of Brown & Root
13 was very significantly behind on tasks that should have
14 been begun long ago?

15 A I may well have said that because that was one
16 of the most significant residual feelings that I had,
17 having read the report and having had the benefit of the
18 feedback from the review with my own personnel as well as
19 the input from Brown & Root, that there were engineering
20 activities that in my view should have been started
21 literally two or three years before the point in time
22 where the report had identified the work hadn't even
23 started.

24 Q How long would you say those conversations or
25 conversation lasted with the attorney?

1 A I would only -- I would be of a mind they were
2 relatively short, maybe in the order of ten, fifteen
3 minute conversations.

4 Q And where did they take place?

5 A I believe they were by telephone. I think I
6 was talking with one of the attorneys over the phone from
7 my office.

8 Q Did you, at any time between May the 8th and
9 the first day of hearings, actually meet face-to-face
10 with any of the Houston Lighting & Power attorneys?

11 A Between May the 8th?

12 Q May the 8th when you made the notifications,
13 after that evening, up to the date of the hearings began?

14 A Well, the hearings I know were here in Bay
15 City, and I'll have to try to remember, when did I get
16 down to Bay City and did I see anybody before the
17 hearings started. I assume that it's very likely that I
18 did see our attorneys before the hearings actually
19 commenced.

20 Q Do you remember any further discussions down
21 here in Bay City about Quadrex?

22 A No. Except for the conversations that I had
23 with Mr. Sells during one of the breaks, in I believe the
24 first week of the hearing.

25 Q You don't remember any discussions with the

1 Houston Lighting & Power attorneys during that time?

2 A Not that I recall.

3 JUDGE BECHHOEFER: Mr. Goldberg, in your
4 answers concerning attorneys, are you including non-
5 Washington based attorneys, such as Mr. Hudson or some
6 Baker & Botts attorneys, or were your answers exclusive
7 of all those attorneys?

8 THE WITNESS: As far as I'm aware, yes, sir. I
9 wasn't sure I caught the first name that you had asked.

10 JUDGE BECHHOEFER: I mention Mr. Hudson, only
11 because he prepared some of the testimony for Phase I.
12 But he or other Baker & Botts attorneys.

13 THE WITNESS: I don't recall having any
14 dialogue with any Baker & Botts attorneys about that, no,
15 sir.

16 Q (By Mr. Sinkin) What about during the
17 hearings, themselves. And I know there was a lot of
18 them, but let's try and limit it. During that first week
19 of hearings, during that week when you met with Mr.
20 Sells, did you discuss with Houston Lighting & Power
21 attorneys, and I do mean to include either the Baker &
22 Botts attorneys or Washington licensing counsel, did you
23 discuss with any of the attorneys for Houston Lighting &
24 Power the Quadrex report?

25 A I don't recall any conversation with any of the

1 attorneys during that particular time.

2 Q Did you at any time, Mr. Goldberg, approach an
3 attorney to discuss whether the Quadrex report should be
4 turned over to the licensing board or to NRC staff under
5 50.55(e)?

6 A Not that I can recall.

7 Q Did any one of your staff, to your knowledge,
8 approach any attorneys to discuss this question?

9 A I have no knowledge of that.

10 Q Back to the meeting at 8:00 o'clock in the
11 morning on the 8th, did you and Dr. Sumpter and Mr.
12 Robertson make an effort at that time to determine in
13 your own minds what should be notified to the Nuclear
14 Regulatory Commission?

15 A I think the conversation at that juncture was
16 focused on putting in perspective what these findings
17 really signified. And I don't believe that there was any
18 meaningful discussion of reportability until we got the
19 Brown & Root input.

20 I recollect that they were of the mind that we
21 would likely only be receiving one recommendation from
22 Brown & Root regarding reportability, which I was
23 personally very encouraged by that. But it remained to
24 be seen what Brown & Root's input would finally be. They
25 did not know for sure.

1 I think the real dialogue on reportability
2 started after we received the input from Mr. Saltarelli.

3 Q Were you surprised when they told you that
4 Brown & Root had only found one potentially reportable
5 item?

6 A I think the word I used previously -- I was
7 encouraged that that seemed to be Brown & Root's bottom
8 line. It remained to be seen whether it would be ours.
9 Certainly if Brown & Root's preliminary findings were
10 that they were going to be 20 or 30, that would have put
11 it in a much different perspective than if it was only
12 one.

13 Q I understand that you would be encouraged by
14 that. My question was really, whether you were surprised
15 that they had found only one, having seen the report,
16 yourself?

17 A Well, you have to understand that there was a
18 considerable difference from the time I received their
19 input and from the time I first saw the report.

20 The report at first blush characterized a
21 number of matters under the most serious category, which
22 happened to include some matters that might well be
23 reported, I believe, to the NRC. It includes matters
24 that might delay licensing only because the work isn't
25 done; it identifies a host of suggestions on how to

1 organize and engineering effort to accomplish the
2 required effort.

3 But those, to a large extent, represented
4 Quadrex's view on how it might best be done. You
5 couldn't make those distinctions when you first pick up
6 the report. You have to take some time to think about
7 what they say, what they mean, and have to catalogue
8 these matters in your mind. And a lot of that had
9 transpired, clearly, from the time I received the report
10 on May 7th, until we got together on the morning of May
11 8th.

12 Q After the initial meeting on May 7th had
13 adjourned, we talked yesterday about a meeting you had
14 with Dr. Stanley and -- Mr. Stanley and Dr. Sumpter. At
15 that meeting, did you all attempt to go through the most
16 serious findings and categorize them into the various
17 categories you've just mentioned?

18 A I don't believe so. I think the dialogue I
19 recall was before there had been any effort to try to get
20 a perspective; it was a dialogue that followed early
21 impressions of what I had seen. And it's distinctly
22 possible, incidentally, that that dialogue could have
23 occurred the next morning while we were over at Brown &
24 Root.

25 I know I said yesterday I thought it was in my

1 office on the afternoon of the 7th, but it's distinctly
2 possible it might be in Brown & Root's offices on the
3 morning of the 8th. But whichever way it was, it was
4 before we had the full perspective; it was the early
5 concern.

6 Q Now, I need to straighten this out if we can.
7 One meeting -- that's Dr. Sumpter and Mr. Stanley. And
8 Mr. Robertson is absent at the Brown & Root review. Then
9 there's another meeting the next morning that's Dr.
10 Sumpter and Mr. Robertson and yourself, but Mr. Stanley
11 is not present. Is that correct?

12 A Well, wait a second. I think I've got my dates
13 mixed up. Let me start again.

14 Q Okay.

15 A Yesterday, I think I said that I had what I
16 recall was a meeting, which was between myself, I believe
17 Dr. Sumpter, and Mr. Stanley. And I thought that
18 occurred in my office on the afternoon of May the 7th.
19 It is possible that that meeting was the morning of May
20 7th; get my dates right.

21 When we were together at Brown & Root, that
22 conversation might well have occurred then. I seem to
23 think -- yesterday -- that it was the afternoon. It's
24 possible that it was the morning. It was early on,
25 clearly, in terms of when I had seen the report.

1 JUDGE BECHHOEFER: Mr. Goldberg, did you go
2 over to Brown & Root prior to the time, on May 7th, prior
3 to the time that Quadrex presented the report to Houston
4 Lighting & Power, which you said was around noontime, I
5 guess?

6 THE WITNESS: If I understand your question,
7 Mr. Chairman, is: Had I gone over to Brown & Root
8 prior to the morning of the 7th?

9 JUDGE BECHHOEFER: No, prior to the time on the
10 7th when the report was presented by Quadrex.

11 THE WITNESS: Oh.

12 JUDGE BECHHOEFER: I'm trying to fit together
13 where the sequence of events --

14 THE WITNESS: I'm sure I was over there before
15 maybe the meeting started. For some period of time, but
16 I can't recollect with any surety whether I was there an
17 hour before the meeting started, or a half hour before
18 the meeting started. I was there for the express purpose
19 of attending the meeting.

20 MR. AXELRAD: I think there may be some
21 confusion. I think you said something about the morning --
22 the the meeting starting around noon. The meeting on the
23 morning of May 7th was in the morning, it's started
24 earlier. I'm not sure whether --

25 JUDGE BECHHOEFER: The meeting at which Quadrex

1 presented its findings?

2 MR. AXELRAD: Why don't you ask Mr. Goldberg
3 when that meeting started.

4 JUDGE BECHHOEFER: When did that meeting start
5 and also where was it?

6 THE WITNESS: The meeting was held at the
7 offices of Brown & Root.

8 JUDGE BECHHOEFER: I see, okay.

9 THE WITNESS: And it started in the morning and
10 I can't honestly say -- I think it started early -- it
11 might have been 8:00 a.m., it might have been 9:00 a.m.;
12 it was in that general time frame.

13 JUDGE BECHHOEFER: I see. And this other
14 meeting, if it occurred at Brown & Root, was prior to
15 that? The meeting between you, Dr. Sumpter and Mr.
16 Stanley? Is that prior to the formal presentation?

17 THE WITNESS: It could have been. I said
18 yesterday I thought it was in my office the afternoon of
19 May the 7th. It is possible that maybe that conversation
20 occurred early on the same morning of the presentation.

21 I wouldn't be absolutely comfortable with
22 saying that I'm certain it was on the afternoon of the
23 7th; it might have been earlier on the 7th.

24 JUDGE BECHHOEFER: But it was likely that after
25 you got the formal report --

1 THE WITNESS: It was after we had the report in
2 hand and we had had an opportunity to see some of the
3 dialogue in the report, itself.

4 JUDGE BECHHOEFER: I see.

5 Q (By Mr. Sinkin) The meeting with Dr. Sumpter
6 and Mr. Stanley was after you had had a chance to review
7 the findings in the report and develop your own reaction
8 to them, suggests to me it was more likely it was after
9 the May 7th meeting.

10 Were you given a copy of the Quadrex report at
11 any length of time of significance prior to the May 7th
12 briefing beginning?

13 A No, I received my copy of the report on May
14 7th, just prior to the briefing. That's why I say I
15 thought it was the afternoon of the 7th.

16 Q Okay.

17 A I did have some contact with them that morning,
18 so I don't want to, you know, eliminate that possibility.

19 Q Let me ask you, Mr. Goldberg, on Page 18 of
20 your testimony --

21 JUDGE BECHHOEFER: May I interrupt just one
22 minute to follow through. On page 18 of your testimony,
23 you state that the May 7 briefing was held at HL&P's
24 offices, which was my impression when I asked my first
25 series of questions. That was why I was trying to get

1 the matter of either Brown & Root or HL&P straight. I
2 was assuming that the briefing occurred in HL&P's
3 offices.

4 THE WITNESS: No -- Mr. Chairman, that's an
5 error. That briefing was definitely held at the Brown &
6 Root offices.

7 MR. AXELRAD: It might be useful to formally
8 correct the exhibit, or the testimony, to reflect what
9 Dr. -- Mr. Goldberg just said.

10 MR. AXELRAD: That would be Brown & Root's --
11 substituted for HL&P's at Page 2 of Line 18.

12 JUDGE BECHHOEFER: Mr. Sinkin, you can proceed.

13 Q (By Mr. Sinkin) When you convened the meeting
14 on May 8th at noon with Dr. Sumpter and Mr. Robertson and
15 received the report from them, from Brown & Root, and
16 indeed there was only one notification that they
17 recommended, were you at all skeptical that Brown & Root
18 had done a thorough job to identify potentially
19 reportable findings?

20 A I think it's fair to say that we had Brown &
21 Root's input and it was our job to review the facts and
22 decide whether or not we agreed with that. So until we
23 complete such a review, I think by definition, there's an
24 element of skepticism. The ultimate responsibility for
25 reportability does fall on the licensee; we treated this

1 strictly as input.

2 Q Did you have any reason to believe, based on
3 their prior behavior, that Brown & Root would have tended
4 to minimize the number of items it identified?

5 A I don't think that I would have any special
6 basis to think that they'd minimize it any differently
7 than would have been the case with any other contractor.
8 I think clearly an engineering organization that is
9 reviewing matters that relate to their work will look at
10 them very carefully and clearly, they may call certain,
11 if I can use the expression, "calls" advisedly, where
12 there's a question, they might call it in their favor.
13 That's always a possibility. But I wouldn't think that
14 there would have been any different attitude in Brown &
15 Root's evaluation than there would have been in any other
16 architect engineer's evaluation.

17 Q In the meeting of the review team on May the
18 8th, which is yourself, Dr. Sumpter and Mr. Robertson,
19 besides reviewing the report, itself, and the information
20 transmitted from Brown & Root on their overnight review,
21 did you review anything else in making your
22 determinations about notification?

23 A There's nothing that clearly comes to mind. We
24 may well have. We might have looked at the guidelines
25 from the NRC on reportability; I don't know whether we

1 did or we didn't. But I can't seem to recall anything
2 specific that we looked at beyond the information which
3 was brought to that meeting by Mr. Robertson and Dr.
4 Sumpter and the subsequent input from Brown & Root.

5 Q When you all sat down to begin your review, did
6 you have a preliminary discussion about the criteria that
7 would be applied to decide whether an item would be
8 notified?

9 A I don't know that we had a preliminary
10 dialogue. I think that we, in the course of reviewing
11 these matters, from time to time would probably be
12 talking in terms of, "Does this constitute a deficiency?
13 Is it a deficiency which left uncorrected might effect
14 safe operation of the plant? And is it designed, for
15 example, a design, for example, that's been released for
16 construction or is it indicative of a significant break
17 down in quality assurance?"

18 I think those kinds of dialogues went on during
19 the review.

20 Q Let me go back to the hypothetical we used
21 yesterday, and I'll lay it out in as close a detail as I
22 can, of the design process having been completed for the
23 postulated break outside containment, the person in
24 charge of that says, "I'm all through, we're not going to
25 do anything more, it's released to construction." The

1 next day someone discovers that this design which did
2 require criteria for jet impingement does not have any
3 criteria for jet impingement. On the basis of that one
4 design, do you have a significant breakdown in quality
5 assurance in your view under 50.55(e)?

6 A If I knew that that was isolated, because I had
7 access to other information that would show that it was
8 isolated, it may not then be reportable. That would be a
9 judgment call. There are a number of tests that have to
10 be made. Clearly, if it had been left uncorrected, and
11 it would pose a concern for the safe operation of the
12 plant, then as an individual matter, it would be
13 reportable.

14 But if it didn't fill that criteria and then we
15 were examining the question from a standpoint of, "Would
16 it constitute a significant breakdown in quality,"
17 there's where one has to decide whether it is a systemic
18 question or whether it is an isolated oversight.

19 Q When you came to to Houston Lighting & Power,
20 you did a review of the history of the project to some
21 extent?

22 A To some small extent, yes. I was principally
23 focusing on the review of the project from the standpoint
24 of what I first knew of the project, which started with
25 the show cause order. That was the most conspicuous

1 aspect of the project, at least at that point in time.
2 That's where most of the activity seemed to be focused,
3 on what actions needed to be taken to deal with those
4 issues, and, of course, it was the subject in a hearing.

5 As a separate matter, the reasons that I stated
6 yesterday, I perceived that it was very important to get
7 a handle on engineering from a standpoint of knowing
8 where they were, you know, how equipped were they for the
9 job at hand and would we be able to move forward in a
10 fairly efficient fashion once we had hopefully completed
11 all the necessary remedial actions associated with show
12 cause. So that became a parallel area of interest.

13 Q Did you review the previous 50.55(e) reports
14 that had came out on the project at that time; we're
15 talking about October 1980.

16 A I don't believe so. I think that as matters
17 that might have been previously reported may have come
18 into discussion, someone might say, "And that one was
19 reported to the Nuclear Regulatory Commission."

20 Q Did you review the previous HL&P quality
21 assurance audits of Brown & Root?

22 MR. AXELRAD: Mr. Chairman, can I have a
23 clarification? When are we talking about?

24 MR. SINKIN: October 1980.

25 MR. AXELRAD: October 1980.

1 MR. SINKIN: When he came to HL&P.

2 A No. Not -- I made no specific efforts to go
3 back and study old audit reports. However, as the issues
4 would focus in the hearings, for example, on matters of
5 construction, I might well have had access to information
6 about prior QA audits. But I didn't go through some
7 systematic review of the old ones.

8 Q (By Mr. Sinkin) After you took the job in
9 October of 1980, let's say through May 7th, 1981, did you
10 routinely receive the quality assurance audits being
11 conducted by Houston Lighting & Power of Brown & Root?

12 A I believe I routinely received -- well, let me
13 backtrack. Routinely, I've been getting them for years.
14 Now I've got to go back to 1980.

15 Q You are saying you get them now?

16 A I have been getting them for years. But I'm
17 not sure -- was I or was I not getting them in 1980? I'm
18 frankly not sure. That's going back awfully far.

19 Q You didn't specifically ask, when you came on
20 the job in October 1980, that you be routinely sent the
21 quality assurance audits of Brown & Root by HL&P?

22 A I'm not sure I recall that either.

23 Q Returning to the May 8th review team meeting,
24 you stated that Mr. Powell came in around 6:00 or 6:30
25 and that he was the chairman of the incident review

1 committee. Who called Mr. Powell and asked him to come
2 to that meeting?

3 A I'm going to just say I suspect it was probably
4 Mr. Robertson. Mr. Robertson was the manager of nuclear
5 licensing and Mr. Powell was one of the employees under
6 his charge, so I'm of the opinion it was probably Mr.
7 Robertson, might well have been Dr. Sumpter. It's even
8 possible it was myself. I wouldn't rule that possibility
9 out.

10 Q But you don't remember --

11 A I don't remember.

12 Q -- making the --

13 A -- with certainty who called, no.

14 Q And when Mr. Powell came to the meeting, was he
15 asked to do anything more than simply call Mr. Crossman
16 or anyone at the NRC he could reach and report the
17 findings that you had decided should be notified to the
18 NRC?

19 A I wasn't asked to do anymore. I think we took
20 a little time to identify to him that we had gotten the
21 results of the review, of the Quadrex review, that Brown
22 & Root had undertaken to review matters for reportability
23 and we had received their input and conducted our review
24 of these matters and I had told Mr. Powell those matters
25 that we believed needed to be reported to the Nuclear

1 Regulatory Commission.

2 Q I was really looking for, did he do anything
3 other than receive that information from you and then go
4 call? Did he do any review of the Quadrex report himself
5 or discuss it with you in any way?

6 A I said that we did give him some introduction
7 to the subject. He was not reviewing the report. We
8 attempted to bring him up to date on what had transpired
9 and we identified for his information what matters needed
10 to be reported to the Nuclear Regulatory Commission.

11 Q Prior to May the 8th, had Mr. Powell been made
12 aware that the Quadrex report was being done?

13 A I have no way of knowing. I am sure that there
14 were significant numbers of personnel on the project who
15 were aware that the review was being performed. If Mr.
16 Powell was one of them, so be it; I don't know. I think
17 there were literally hundreds of people on the project
18 who knew that that review was in progress.

19 Q Well, after the April 13th, 1981 briefing by
20 Quadrex, you had in your mind that there was the
21 possibility that there would be potentially reportable
22 findings. Is that correct?

23 A Yes; as I recall, the April 13th review was a
24 shortened slide show version of ultimately what was shown
25 in far more detail on April 30th. And it was during the

1 April 13th review that I was attempting to catalogue in
2 my mind areas that might ultimately contain potentially
3 reportable matters. And I believe that some time
4 following that meeting, I shared that feeling with Mr.
5 Sells that we didn't yet have a report, but we had gotten
6 some preliminary visibility of what was going to likely
7 be in that report and that there were likely candidates
8 for reportability but we had no way of knowing which ones
9 those would specifically be and what the numbers might
10 ultimately be.

11 Q Between April 13 and May 8, you gave no
12 specific directive that Mr. Powell should be alerted that
13 there might be 50.55(e) reports coming out of Quadrex?

14 A I don't believe so, no.

15 Q On Page 24, Line 18 of your testimony, you
16 discuss the composition of the Houston Lighting & Power
17 incident review committee, which is abbreviated in your
18 testimony as IRC. I'd like you to identify, if you
19 would, the individuals that on May 8, 1981, filled the
20 three positions, I guess the two first positions that you
21 identified there; first of all the team leader nuclear
22 licensing?

23 A That would have been Mr. Michael Powell.

24 Q And the project QA supervisor?

25 A I'm not sure. I think that was Mr. Tom Jordan,

1 but I would tell you I'm not absolutely comfortable with
2 that.

3 Q Could it have been Mr. Overstreet?

4 A It could well have been Mr. Overstreet. In
5 fact, now that you mention his name, I know that he and
6 Mr. Jacobi on a number of occasions were working on
7 revising the procedure for reportability and it could
8 well have been Mr. Overstreet.

9 Q And the supervising project engineer, design
10 engineering?

11 A I'm not absolutely comfortable on this one
12 either. I think it was Mr. John White.

13 Q Could it have been Mr. Blau?

14 A It could have been Mr. Blau or Mr. White.

15 These were key people on the technical team. But as far
16 as -- it's hard to sort names and places and jobs going
17 back that far.

18 Q Well, if you think back to the review meetings
19 that were being held with Quadrex, April 13 meeting,
20 those sorts of meetings, Mr. Blau was frequently present,
21 was he not?

22 A Yes, he was.

23 Q Does that refresh you in any sense as to
24 whether he fills this position?

25 A I think Mr. Blau was present, because among

1 other things, it might well have been this reason, he was
2 one of the more knowledgeable engineers who had been on
3 that project for a considerable period of time, and he
4 had considerable personal knowledge as to the status of
5 engineering activities on the project.

6 Q Had he been on the project longer than Dr.
7 Sumpter?

8 A I believe that he was on the project more time,
9 if you will, maybe not associated overall for more time.
10 Dr. Sumpter was in charge of nuclear services when I came
11 to HL&P, and basically nuclear services constituted
12 engineering activities both on and off project.

13 Mr. Blau was one of those engineers who was on
14 project, and he reported ultimately to Dr. Sumpter, but
15 Dr. Sumpter was physically located off project. So in
16 terms of day-to-day contact with the project and
17 knowledge of the activities, I suspect that Mr. Blau had
18 a little bit more personal knowledge on that than Dr.
19 Sumpter.

20 Q Mr. Goldberg, in the Quadrex categories, one of
21 them was the generation of reliable power.

22 MR. AXELRAD: Mr. Chairman, may I just object.
23 I think if Mr. Sinkin is going to be refer to a
24 categorization, it should be in the precise term that the
25 Quadrex report refers to it.

1 Q (By Mr. Sinkin) At Page 29, Line 15, or Line
2 13 through 15 of your testimony, you state that the
3 serious findings were not reportable because they did not
4 relate to safety but only to the generation of reliable
5 power. Are you with me?

6 A Yes.

7 Q When I read Quadrex at some point and saw the
8 term generation of reliable power, I thought about,
9 "Well, that means the plant won't actually operate and
10 deliver electricity." That's how you understand that
11 categorie?

12 A Yes, and it constitutes the balance of the
13 plant other than the nuclear safety related portion that
14 is needed to generate the electric power.

15 Q Could there be an event at an operating nuclear
16 power plant that would cause a turbine to trip but would
17 not be safety related?

18 A Certainly.

19 Q Did you give me an answer to that question?

20 A I said certainly.

21 Q I didn't hear it, I'm very sorry.

22 A I beg your pardon.

23 Q And such an event would cause the flow of
24 electricity from the plant; is that not correct?

25 A That is correct.

1 Q When a turbine trips at an operating nuclear
2 power plant, are conditions created which cause a
3 heightened sense of safety concern? Let me -- I haven't
4 asked that very well. But in a routinely operating
5 reactor, you're in a certain state of mind. When you
6 know that there's a turbine trip going on, you have a
7 heightened sense of a potential safety problem?

8 A I wouldn't say that. You have what's called an
9 upset condition for which the plant is designed. And
10 there is sufficient margins of safety under that
11 operating situation which is other than normal, certainly
12 no less safe than previously.

13 Q Was there a particular concern on this project
14 about upset conditions and how Brown & Root was dealing
15 with them?

16 A I think that there was a general interest to
17 making sure that all the systems were being designed in
18 consideration of the normal emergency upset and faulted
19 conditions.

20 Q Why don't we define that term for the record,
21 "faulted conditions."

22 A Faulted condition is a condition associated
23 with any postulated failure, such as a pipe break
24 failure.

25 Q So in essence, the word "faulted" is used

1 because there's some fault in the way the operation is
2 proceeding?

3 A It's usually associated with an actual
4 equipment failure.

5 Q Equipment failure?

6 On Page 31 of your testimony, Question 41, you
7 identify the three subset categories that was used in
8 their most serious findings, or at least you're asked
9 about those in the question. I'd like you to review the
10 question and your answer before I ask the question.

11 Q In the May 7th review, when Quadrex presented
12 the report at the Brown & Root offices, was there an
13 effort made to have Quadrex identify which of the three
14 categories of the most serious findings each of their
15 findings fell into?

16 A No, I don't believe there was any effort in my
17 presence to have Quadrex do that.

18 Q When you met on May 8, did you and Dr. Sumpter
19 and Mr. Robertson make an effort to systematically
20 categorize the Quadrex findings into one of these three
21 most serious areas?

22 A I think as we went through our review, we were
23 mentally putting them in these categories as well as one
24 other one, which, in effect, is perhaps related to the
25 one on the subject of delay, and that is that Quadrex had

1 suggested a number of ways that it would engineer a power
2 plant, techniques, if you will, and clearly, I guess the
3 theory would be that if those were efficient ways of
4 doing it, then you might get to the end quicker and more
5 efficiently.

6 And I would say that those, I guess, are part
7 of the set on delay of license. But I think it's a
8 rather interesting aspect of it, because it really
9 represents comparing what they saw with techniques that
10 they personally were familiar with.

11 Q Is it your understanding that the reason they
12 would differ as to the technique was simply a matter of
13 efficiency or did they on occasion believe that their
14 technique was a safer way of doing it?

15 A I would answer your question in this
16 way: There are lots of ways that one can
17 accomplish a task. Some ways are more straightforward
18 than others. And one could make the argument that,
19 "Well, if it's more straightforward, then you are less
20 prone to make mistakes."

21 In the realm of choice of how an engineer goes
22 about his business, there's no question that some ways
23 are better than others. And there's no question that we
24 would say that we strive to get it done the best way we
25 can. But to take a photograph at a point in time and to

1 compare what you see with ways that you know are better,
2 doesn't in itself suggest that what's there is deficient;
3 just suggests that there's clearly an opportunity for
4 improvement.

5 Q On the whole, based on the Quadrex report, was
6 your impression that Brown & Root more generally was
7 using methodology that was less straightforward than you
8 would have liked?

9 A I think it suggested what I tried to
10 characterize, I believe yesterday, that Brown & Root
11 hadn't engineered enough plants to come to realize that
12 there are some ways that are better than others; a lot of
13 that improvement comes with experience. And what it
14 signalled to us was that if we could infuse more
15 experience into Brown & Root, then we would more quickly
16 come upon these more efficient ways of doing business.

17 But all of us have come from firms who had to
18 learn very similarly to the way Brown & Root was
19 learning, and we can reflect on some of the earlier ways
20 that we did business, and we were not ashamed of its
21 result.

22 But quite frankly, in contrast to how we would
23 do it today, it was a little archaic in terms of being an
24 efficient organized effort that would allow you to cover
25 the ground in a short time and at lowest possible cost

1 while still providing a measure of quality that's
2 required.

3 Q Did you, on the whole, after reviewing Quadrex,
4 view the Brown & Root effort as archaic in your sense in
5 that they were using techniques from the early '70s,
6 rather than late '70s and early '80s?

7 A I'd rather use the word in the context of,
8 shall we say, more rudimentary approaches, as opposed to
9 archaic.

10 Q Rudimentary in the sense of --

11 A Well, not as sophisticated, perhaps, as someone
12 who's been at it longer than they --

13 Q You were aware, as soon as you arrived at HL&P,
14 or perhaps even before, that this was Brown & Root's
15 design and engineering contract that they had performed?

16 A I was aware that this was there first, yes.

17 Q I mean on a nuclear power plant.

18 A Yes.

19 Q I want to discuss with you the term "final
20 design." I have heard you speak on more than one
21 occasion as to what you would consider -- when you
22 consider a design final. Let's start with that question.
23 When do you consider a design final?

24 A The design, in my parlance, is final, when all
25 the design activities including final calculations have

1 been issued.

2 Q By final calculations, you mean the
3 verification has been done?

4 A I'm saying that in the course of the design and
5 construction of a power plant, particularly a nuclear
6 power plant, there are certain calculations that are
7 dynamic, give you an example.

8 Under the ASME 3 code, you do not have a final
9 stress analysis until you have finished building the
10 plant. And then you must reconcile that analysis with
11 exactly what's done in the power plant. And until that's
12 done, design isn't finished. The designer is still at
13 work doing analysis. So that you end up with hardware
14 and analysis that match. It's a iterative process.

15 Q An iterative process, a process that repeats
16 itself?

17 A It can repeat itself. Now, I would add that
18 that's a little bit different in terms of talking about
19 when is it considered final for purposes of released for
20 construction. And I don't want to confuse that issue.
21 One can issue a drawing for construction before all the
22 design activities have been completed.

23 For purposes of reportability under 50.55(e),
24 once that drawing is issued, it's academic whether the
25 calculations are finished. If you build it and it's

1 wrong, it may well turn out to be reportable.

2 Q That is where I was going. To clarify that
3 section 50.55(e), lli states a significant deficiency in
4 final design as approved and released for construction.
5 So you are differentiating final design as you have
6 stated it -- yes it's in his testimony. Final design as
7 it's used in 50.55(e), from the first description you
8 gave me of final design?

9 A Obviously when you ask the question, "What does
10 final design mean?", you have to put it perhaps in more
11 specific context.

12 Q In that context, would any document used to
13 construct the plant be a final design?

14 MR. AXELRAD: Mr. Chairman, can I have a
15 clarification of what is meant by "that context."

16 Q (By Mr. Sinkin) In the context of 50.55 (e),
17 excuse me, would any document used to construct a plant
18 be a final design?

19 A Not in that context. I think interestingly
20 enough, we had a discussion, I think it was early
21 yesterday, where we were talking about certain kinds of
22 diagrammatic information which is used extensively for
23 verification of installation, but it isn't the basic
24 documents which one builds the installation.

25 If you would like, I can go on to perhaps -- I

1 see you are troubled by what I've said.

2 Q A little bit. If you'd like to elaborate.

3 A Let's take, for example, the design of a fluid
4 system. One of the key up front documents is a piping
5 and instrumentation diagram. And from the information
6 contained on that document, is developed a drawing. And
7 that drawing gets released for construction and you build
8 it and then later on, there is recognized a mistake.

9 Q Let's clarify. What kind of mistake?

10 A Well, let's assume that the mistake is that
11 somebody failed to take into account the requirements of
12 a regulation that existed at the time the design was
13 performed.

14 And now you are faced -- and --

15 Q I'm sorry to interrupt. But you are talking
16 about a mistake in the piping and instrumentation
17 diagram, or are we talking about a mistake in the
18 installation?

19 A We're talking about -- ultimately about the
20 installation.

21 Q Okay.

22 MR. AXELRAD: Mr. Chairman, I might suggest
23 that counsel for CCANP not interrupt Mr. Goldberg while
24 he gives his explanation. If, when Mr. Goldberg gets
25 finished, there's still questions, then clarifying

1 additional questions can be asked. But I think the
2 interruption in the flow of the presentation is not
3 helpful.

4 MR. SINKIN: That's fine.

5 THE WITNESS: What I was trying to lead to was
6 this, that if the character of this mistake were a case
7 of having overlooked the requirements of a regulation and
8 this wasn't -- let's say an isolated case, let's say this
9 was a fairly broader that occurred in many instances, a
10 systemic error, that that might well constitute a
11 significant breakdown in quality assurance. And if any
12 of those mistakes, which if had they gone uncorrected,
13 could have adversely affected the safe operation of the
14 plant, then, you know, you've got the makings of a
15 reportability matter.

16 So I'm assuming that we've got all the
17 ingredients necessary for reportability.

18 Let's assume it was an isolated error, it
19 wasn't systemic, and had it not been uncovered, it would
20 have had an adverse effect on safe operation of the
21 plant, and it's found after the design has been released
22 for construction, then that would constitute a matter of
23 reportability.

24 But one has to make a distinction between what
25 I gave as an example and what is often times called

1 "design development," where the complete design is not
2 known at the time that the design is released for
3 construction. And a portion of the design is released
4 and then at a subsequent point in time further design
5 information is released, and occasionally, doesn't always
6 work out, that everything that was previously released is
7 compatible with everything that follows. And you get
8 into what's called rework.

9 Q Okay. We began this particular phase of the
10 discussion when I asked you if any document used to
11 construct a plant is a final design. And we then were
12 talking about some documents that are used for
13 construction verification as opposed to actual
14 construction, such as a piping and instrumentation
15 design. I want to change your hypothetical just a little
16 bit.

17 You've done the piping and instrumentation
18 design, the drawings been developed from that, the
19 drawing is released for construction, the system is
20 built; you then go with the piping and instrumentation
21 design as a verification tool to look at the system. Is
22 that correct?

23 A That's used as part of the verification
24 process, yes.

25 Q If at that time, the person using the piping

1 and instrumentation design discovers a significant
2 deficiency in that design as opposed to what's been
3 built, could that lead to notification under 50.55(e)?

4 MR. AXELRAD: Mr. Chairman, let me make sure I
5 understand the question.

6 A The question is, that it's not the drawing that
7 was used for construction that's deficient, but the
8 drawing or sketch, whatever it is that was being used for
9 verification is deficient. That's the hypothetical?

10 MR. SINKIN: That's correct.

11 THE WITNESS: I'd say that now you've got a
12 weakness in the inspection process, owing to a defective
13 instrumentation document, and if that were of an isolated
14 nature and if it had gone uncorrected, if it did not pose
15 a threat to the safe operation, it would not be
16 reportable.

17 On the other hand, if it did pose a threat, it
18 would be. Or if it was systemic, it would conceivably be
19 reported under the category, assuming it's satisfied the
20 threat to safe operation, as a significant breakdown in
21 quality assurance. So it is possible, given the
22 appropriate circumstances, that that could qualify for
23 reportability.

24 Q (By Mr. Sinkin) So in that first instance of it
25 not being systemic, you are treating the piping and

1 instrumentation diagram as falling under final design as
2 used in 50.55(e)?

3 A I don't think -- I'm getting a little confused
4 with that question. I thought we had tried to show a way
5 in which a problem in a diagram alone might pose a
6 problem, if it were used for inspection and it were
7 determined to be incorrect so therefore the inspection
8 was defective.

9 JUDGE SHON: Mr. Goldberg, I think that's not
10 quite what Mr. Sinkin was driving at. If I can intercede
11 a bit, we seem to be in a bit of a knot. I think the
12 problem that he's set to you, really, was one concerning
13 the piping and instrumentation diagram, which is sort of
14 a fundamental document; it existed in the beginning so to
15 speak and other drawings were made to it; is that
16 correct?

17 THE WITNESS: That's correct.

18 JUDGE SHON: Now, construction has occurred and
19 things have been built according to the other drawings
20 and someone in the course of using the piping and
21 instrumentation diagram to check out the equipment and so
22 on, discovers that it has a fundamental error in it; you
23 can think of a lot of things, maybe there isn't
24 sufficient redundancy or separation or not enough
25 instrumentation of some sort. And it doesn't meet the

1 regulatory requirements. And it is a matter important to
2 safety.

3 Is that reportable now as a single instance not
4 as a general breakdown, but as a single instance in which
5 a drawing namely the piping and instrumentation diagram
6 was in some sense released for construction, was not used
7 directly for construction, but it was a thing on which
8 the construction was ultimately based; would it be
9 reportable; that's what you're after.

10 MR. SINKIN: Precisely.

11 THE WITNESS: Yes, I think given that model, it
12 would be.

13 JUDGE SHON: Thank you.

14 Q (By Mr. Sinkin) And it would be reportable
15 under the section that talks about a significant
16 deficiency in final design, released for construction?

17 A Yes.

18 MR. AXELRAD: Mr. Chairman, if CCANP has come
19 to some nature stopping point, been at it for about an
20 hour and-a-half, it might be an appropriate time for a
21 break.

22 JUDGE BECHHOEFER: I think that would an good
23 idea. I had one question I wanted to follow up on, what
24 Judge Shon just asked. If you had one of these designs
25 on which construction was based that had only preliminary

1 calculations in it, and later calculations turned out to
2 be different, at what -- both differed and as having an
3 effect on safety, let's make that assumption -- at what
4 point would that so-called final design be reportable?
5 Or first, would it be, and then at what point, if so at
6 what point.

7 THE WITNESS: I'm trying to answer your
8 question, Mr. Chairman, with a nice efficient answer.
9 But I hesitate, because I can think of instances where we
10 release piping drawings for construction and there can be
11 a change in some plant operating condition that changes
12 the temperatures, that changes the stress levels in the
13 piping, that requires modification of piping that was, in
14 fact, released for construction, and we don't treat that,
15 since it's a conscious design development, as a defect in
16 the sense of somebody failing to do something that he was
17 required by regulation to do.

18 So you really have to be careful in just taking
19 this pattern of, "I have a design and it was released for
20 construction, and now lo and behold it has to change."
21 Does that not automatically, if it would satisfy all the
22 other conditions, constitute a reportable matter? It may
23 not.

24 JUDGE BECHHOEFER: I was referring mostly to
25 the example or the general example you gave on Page 32,

1 which in your answer 42, and if -- I'm just saying if the
2 preliminary assumptions turned out to be not as
3 conservative as expected, for instance, at what point or
4 would it become reportable assuming construction was
5 being undertaken on the basis of the preliminary design.

6 THE WITNESS: Well, my judgment would be this:
7 If I were taking the case, let's say, of a safety related
8 structure and I undertook to build that structure using
9 preliminary information, which more times than not is the
10 way it happens, because so much of the intelligence isn't
11 available when people want to get these plants started,
12 and then at a later date, owing to the advent of the new
13 information, loads, perhaps coming from support systems
14 for piping or for cable trays or a host of other plant
15 equipment, if I ended up with a structure that was no
16 longer technically adequate and it had been built and
17 there it stood and has gone uncorrected, there's just no
18 question that it would pose a threat to safe plant
19 operations. I would have to report that as a significant
20 problem.

21 JUDGE BECHHOEFER: What if construction had not
22 yet been completed and the new information came forward?

23 THE WITNESS: That would be a judgment call. I
24 think I'd call it in as a potential and we'd see whether
25 or not it would ultimately follow to a final reportable.

1 I think that that kind of an example is in a potential
2 gray area. My feelings about this kind of an issue is
3 that some things are fairly permanent that can't be
4 easily corrected, that they would tend to be temptation
5 for designers to try to reduce design margins.

6 In the realm of design, there's not much you can
7 do to a structure once, in fact, you've poured the
8 concrete and it's there. Whatever it takes to remedy the
9 problem is a considerable effort and I think that matter
10 should be brought to the attention of the regulatory
11 authorities, given that it would satisfy the other
12 criteria.

13 Whereas if it were something a far less
14 permanency, it was a case of, say, I calculated a heat
15 load and I issued the drawings to the manufacturer of,
16 say, the safety related and heating and ventilation and
17 air conditioning equipment and then I found that my heat
18 loads were too low and I modified my purchase order to
19 increase capacity of the equipment, I would treat that
20 more in the realm of design development. And yet had it
21 gone uncorrected, it might well have posed a threat.

22 But that's one of the the shades of at what
23 point is it design development, at what point is it
24 considered a significant design oversight.

25 JUDGE BECHHOEFER: To take just another

1 example, which I've sort of picked up from another case I
2 was on, but what about rattle space criteria?

3 MR. SINKIN: I'm sorry, I didn't hear that.

4 JUDGE BECHHOEFER: Rattle space criteria, where
5 piping in and out of buildings --

6 MR. SINKIN: I'm still not hearing the first
7 word.

8 JUDGE BECHHOEFER: Rattle space, r-a-t-t-l-e.

9 MR. SINKIN: Rattle space.

10 JUDGE BECHHOEFER: Okay. Yes. At least
11 Bechtel has used that in other contexts. I'm not sure --

12 THE WITNESS: Well, there has to be, when pipes
13 move between buildings that are going to move during
14 ground motion associated with earth quakes, there has to
15 be sufficient flexibility built into the system to allow
16 the differential movement between the two structures. If
17 that's the connotation of rattle space.

18 JUDGE BECHHOEFER: Well, I was thinking where
19 piping through space goes which are larger or smaller as
20 the case maybe, to enter safety structures.

21 JUDGE SHON: I think what the chairman is
22 talking about is the sort of situation wherein a pipe may
23 move with respect to a building wall, for example, what
24 you'd like to do is make sure that the motion stops short
25 of direct contact with some solid portion of the wall so

1 that it doesn't stress the pipe. And it has space to
2 rattle around, in other words. It may be covered by a
3 rubber diaphragm mor something.

4 THE WITNESS: Okay, yes, sir, in that context,
5 there's no question that if that's not an anchor point
6 for the piping system, there has to be sufficient
7 clearance space so that you do not impose excessive
8 movements on the pipe as a result of building movement.

9 JUDGE BECHHOEFER: Right. Now, assuming your
10 later calculations determine that there has to be more
11 space than was originally designated on the plan under
12 which construction of the safety structure took place, if
13 the later calculation -- at the time the later
14 calculations are developed, what happens then?

15 THE WITNESS: I think I'd be first looking at
16 what was the character of the problem. For example, was
17 it a case of where they had an incorrect prediction of
18 movement because of some systematic deficiency in the
19 method of analysis; was this isolated case of where they
20 found later on they had excessive movement or is this a
21 case where the whole design methodology was found to be
22 defective and this was one of the casualties of that
23 defect, then I would be looking at that kind of a
24 situation more pointedly for reportability than just a
25 case of somebody having made some inappropriate first

1 calculation and then finally later on as part of a review
2 of the calculation --

3 JUDGE BECHHOEFER: What I was really driving at
4 is the later case, whether that would fall under the
5 final design released for construction criteria.

6 THE WITNESS: I'd say that in the response I
7 gave, if the reason for the inadequate rattle space was
8 determined to be a fundamental problem with how that kind
9 of decision was being made, so that it was a systemic
10 problem in the design process and it would satisfy the
11 other criteria in terms of had it it gone uncorrected,
12 that would have been, under my mind, reportable.

13 JUDGE BECHHOEFER: That would a QA breakdown.

14 THE WITNESS: Yes, sir.

15 JUDGE BECHHOEFER: What about the isolated
16 instance as a final design approved and released for
17 construction? Under that criteria --

18 THE WITNESS: That might go either way. I
19 think it would depend on at what point in the design this
20 particular problem surfaced. If the design was such that
21 the plant was finished and thought to be complete and
22 then this problem surfaced, I think that that would be
23 the more likely place where it would be categorized as an
24 error, as opposed to a design development, if the design
25 was in process.

1 JUDGE BECHHOEFER: Okay, why don't we take our --
2 about a fifteen minute break.

3 (Morning recess.)
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1 JUDGE BECHHOEFER: Okay, back on the record.

2 JEROME H. GOLDBERG,
3 testified further upon his oath as follows:

4 CROSS EXAMINATION CONTINUED

5 By Mr. Sinkin:

6 Q Mr. Goldberg, on page three two of your
7 testimony, question and answer 41, I'd like you to review
8 those for a moment and then I'll ask you a question. In
9 the question, there's sort of two parts. We're talking
10 about a design that has not be commenced or a design that
11 has not been completed.

12 Let me start with a design that has not been
13 commenced. The question asked was that would you explain
14 why something that has not been commenced would not
15 necessarily be a deficiency in design or quality
16 assurance for design. And at the end of your answer, you
17 are saying that the fact that certain design activities
18 may have not yet commenced, or been completed, generally
19 does not mean there's a deficiency in a design or in
20 quality assurance. Can you conceptualize an event where
21 a design not yet commenced could be a deficiency in
22 design or a deficiency in quality assurance?

23 A In a situation where the design of a feature
24 was totally overlooked and that feature was needed for
25 safe operation of the plant, that would fulfill a

1 situation -- a case of a design not started which could
2 constitute a problem.

3 Q When you were evaluating the Quadrex report,
4 did you have any listing of any sort of the various
5 design activities Brown & Root was carrying out and what
6 stage of development they were in?

7 A I personally didn't have that insight, but a
8 considerable amount of that insight was brought to the
9 meeting by Dr. Sumpter and Mr. Robertson who had spent
10 the previous afternoon and evening working at great
11 length with Brown & Root engineers in trying to establish
12 such matters as the design status.

13 Q On page 38, question 49, I'd like you to review
14 that, if you would.

15 Q How did you know on May 18, 1961, that the
16 design activities associated with protection against
17 internal missiles had not yet commenced.

18 A I got this information on May 8th on
19 discussions with Robertson and Sumpter, that the work
20 hadn't even been started.

21 Q In your view, should the work have been begun
22 by that time?

23 A I don't think so.

24 Q Mr. Goldberg, I have a document called the
25 Brown & Root assessment of the Quadrex design review of

1 the South Texas Project, dated April 1982. Let me just
2 ask you if you have seen that document?

3 A I seem to recall receiving that document years
4 gone by.

5 Q I'm just going ask you to read into the record
6 a small portion of that document.

7 MR. GUTTERMAN May I see it, please?

8 MR. REIS: Can the staff see it, please?

9 MR. GUTTERMAN: Does the staff want to see it?

10 JUDGE BECHHOEFER: Mr. Sinkin, something --
11 would you show us the document you're going to ask him
12 the question about? Are you introducing it?

13 MR. SINKIN: I'm not introducing it, no.

14 JUDGE BECHHOEFER: I'd like to see at least the
15 context and what it looks like.

16 Q (By Mr. Sinkin) Mr. Goldberg, have you had a
17 chance to review that document.

18 MR. AXELRAD: Mr. Chairman, we better identify
19 clearly for the record what it is that Mr. Sinkin has
20 asked Mr. Goldberg to look at. If Mr. Sinkin would like
21 to do that.

22 MR. SINKIN: I believe I read the title into
23 the record when I handed to him.

24 MR. AXELRAD: You did not provide the entire
25 document.

1 MR. SINKIN: I did not -- I just asked him if
2 he'd review what he'd been handed.

3 MR. AXELRAD: Okay.

4 THE WITNESS: I've read what you've handed me.

5 Q (By Mr. Sinkin) I've shown you an excerpt from
6 the Brown & Root response to the Quadrex report which
7 addresses Quadrex finding 4.1.2.1 (b). Is that correct?

8 MR. AXELRAD: Mr. Chairman, I think that all
9 that Mr. Sinkin can do is to identify specific pages from
10 a specific document. I don't think he should
11 characterize it is a response or anything else. He has a
12 title sheet and two specific pages and that is what he
13 should identify for the record.

14 MR. SINKIN: The title sheet as I read earlier,
15 the Brown & Root assessment of the Quadrex design review
16 of the South Texas Project, dated April '82. The pages I
17 am showing to Mr. Goldberg are pages 2-6 and 2-7 which
18 address Quadrex finding No. 4.1.2.1 (b).
19 civil/structural technical adequacy assessment.

20 MR. REIS: Mr. Sinkin, Can the staff see the
21 introcution to that document, any pages -- can the staff
22 examine the full document so that we can see what this is
23 taking as part of.

24 MR. SINKIN: I don't have the full document
25 with me at this time. I'd be happy to provide it on

1 Monday. Q (By Mr. Sinkin) Mr. Goldberg, on the first
2 page of the response, assessment of finding 4.1.2.1. (b),
3 first of all is that the same finding you are discussing
4 in question 48, answer 48, question 49 and answer 49?

5 A Yes, it is.

6 Q Would you please read the sentences beginning
7 at the word "start" that I have marked on that page and
8 ending at the word "stop."

9 MR. REIS: Mr. Chairman, the staff would have
10 to object. We have had no opportunity to look at the
11 beginning of the document, particularly I'd like to see
12 the introduction of the document, particularly if there's
13 any qualifications or caveats that might influence the
14 answer; we'd know whether the question is a fair question
15 or not. And I haven't -- I've been shown the title page
16 and a couple of pages from the middle of the document
17 that I have had no opportunity and it's not -- Mr. Sinkin
18 doesn't have today.

19 MR. SINKIN: Mr. Chairman, the Applicants have
20 a full exhibit and they've already offered it once to the
21 staff for review; it was given to the staff for review,
22 the staff can review the introduction if they want.

23 MR. AXELRAD: Mr. Chairman, it was simply more
24 difficult for anyone to take this document, itself, which
25 is, I would imagine at least 150 pages and review the

1 entire document, each of the particular findings and the
2 introduction deduction and the materials that the staff
3 has been referring to. I'll be perfectly willing to show
4 it to the staff but I'm not sure that that's going to
5 enlighten everyone with the context in which this
6 document was produced or what the document purports to
7 be. And certainly not enlighten the witness unless he
8 took similar time to review the documents.

9 MR. SINKIN: Mr. Chairman.

10 JUDGE BECHHOEFER: I think what you should do
11 is ask your questions and then if the staff, upon further
12 review of the document, doesn't have to be today but I
13 received the document and I don't have it with me, but
14 further review of the staff found some objections, they
15 could raise them then.

16 MR. SINKIN: My only intent, Mr. Chairman, the
17 statements I will ask Mr. Goldberg to read are statements
18 of fact made in this particular report. And I will ask
19 him are those statements correct. And that is the extent
20 of the cross examination.

21 MR. PIFRO: The staff will take exception to
22 Mr. Sinkin saying they're statements of fact. The
23 documents, to the extent they speak, will speak for
24 themselves, and whether they're opinions or facts is
25 something for the Board to decide.

1 MR. AXELRAD: There's also a problem, Mr.
2 Chairman, as to whether or not the isolated sentence or
3 sentences which Mr. Sinkin has to read, even in the
4 context of the two pages; is an accurate representation
5 of what the information conveyed in those two pages is.

6 MR. SINKIN: Counsel will have ample
7 opportunity on redirect if he feels that the information
8 provided by the witness needs to be completed in some way
9 to ask further questions.

10 JUDGE BECHHOEFER: I think that's either
11 redirect or rebuttal, if necessary. I think you may
12 proceed.

13 MR. SINKIN: Thank you.

14 Q (By Mr. Sinkin) Mr. Goldberg, on the first
15 page of text, not counting the cover page, there's
16 sentences marked "start" by me and then "stop" my me.
17 Would you please read those sentences?

18 A Before I read the sentences, I wonder if I have
19 any rights to address this Board. I don't know where Mr.
20 Sinkin is going with this. But I would much prefer to
21 read the entire text into the record, because I feel
22 there is vital information that bears on possibly where
23 he's going with this line of questioning.

24 JUDGE BECHHOEFER: I think we ought to have the
25 complete context, in terms of context, at least.

1 MR. AXELRAD: Perhaps Mr. Sinkin would prefer
2 to mark those three pages for identification as a CCANP
3 exhibit, we'd have that material for everybody to look
4 at.

5 MR. SINKIN: We will mark it it as CCANP 75 for
6 identification only.

7 MR. PIRFO: That's fine, but we don't have even
8 copies of that.

9 MR. SINKIN: Obviously that's the problem of
10 marking it for identification. It was not to be
11 introduced into evidence, just to be used for the limited
12 purpose it's to be used for.

13 MR. PIRFO: It's not a problem the staff
14 created, Judge Bechhoefer.

15 MR. REIS: I object. And further, in the
16 future, I think CCANP should have sufficient copies to
17 give people to look at documents even if they're just to
18 refresh the witness' recollection so that the counsel can
19 be looking at it at the same time. If he intends using
20 documents, he knows ahead of time he's prepared, they
21 ought to be available for distribution. It's not
22 something that he thought of today.

23 MR. PIRFO: This is not some arcane rule --

24 JUDGE BECHHOEFER: Normally that would be good
25 practice. I'm not sure there's any specific requirement

1 to that effect. If it would be available, it would be
2 desirable. But we'll still let you ask the questions. I
3 do think he should be able to read into the record, if
4 the witness thinks that more than just what you
5 designated.

6 MR. SINKIN: I agree with that. What I would
7 like to do, though, for the sake of the record, is have
8 him read the sentences I would like to have him read so
9 that we don't have to go back into the full context and
10 start over again, have him read those sentences I would
11 like him to read and then he can read the entire context
12 if that's what he would like to do.

13 MR. AXELRAD: Mr. Chairman, I'm not sure that
14 we're going to have it included in the record at that
15 point. It would appear to be preferable at that point
16 just to read all three pages into it and then Mr. Sinkin
17 can ask him whatever questions he wants with whatever
18 portion has been read into the recprd, if he doesn't want
19 to do it as an exhibit. If the entire two pages is going
20 to be an exhibit, then I guess there's no problem. The
21 exhibit will be there.

22 MR. SINKIN: Well, perhaps what would be
23 easier, Mr. Chairman, would be to go forward today with
24 having him read the sentences I want him to read, I will
25 make copies before Monday, and introduce it as an

1 exhibit.

2 MR. AXELRAD: Mr. Chairman, if I can make a
3 different suggestion. I don't know how much cross
4 examination Mr. Sinkin has of Mr. Goldberg, but
5 apparently it's going to last beyond today. Why don't we
6 suggest that Mr. Sinkin go to a different subject, got
7 roughly another hour for cross-examine and when he has
8 the exhibit available on Monday, he can cross-examine on
9 the basis of the exhibit. I don't want to interrupt the
10 orderliness of Mr. Sinkin's cross-examination, but that
11 might make it much more easy for other counsel and for
12 the Board to follow his line of examination, if they have
13 the document in front of them.

14 MR. SINKIN: If we're talking about and orderly
15 record for me to insert a whole section of other
16 cross-examination when I'm already introduced this
17 subject, I don't think that provides an orderly record.

18 JUDGE BECHHOEFER: I think we should just
19 proceed and let Mr. Goldberg read the whole thing into
20 the record around then you can identify which sentences,
21 which aspects of that you want to focus your questions on
22 and I think that will, may not speed things up but it
23 will get things moving. Let's do it that way.

24 THE WITNESS: "Brown & Root Response To Quadrex
25 finding No. 4.1.2.1 (b). Brown & Root disagrees with the

1 above finding. The first part of the finding alleges
2 that the civil structural discipline did not question the
3 reasonableness of postulated missiles. The criteria for
4 internal missiles in effect at STP were originally issued
5 in January 1975 as report AD369RD002L 'Internal Missiles'.
6 This document was revised and reissued as TRD1N209RQ013-A
7 in September 1975 and again in April 1979. Each time the
8 document was issued, it was reviewed by the civil
9 structural discipline. In performing a formal review of
10 the document, the civil structural discipline evaluated
11 the criteria, including the reasonableness of postulated
12 missiles.

13 "Moreover, the reasonableness of postulated
14 internal missiles is clearly demonstrated in the TRD and
15 is based on design criteria requirements, as well as
16 design philosophy. In the TRD, it is emphasized that,
17 where possible, component and system design will preclude
18 the generation of missiles. This is achieved by suitable
19 choice of materials, consideration of normal and faulted
20 stress levels, and definition of system and component
21 characteristics that avoid missile producing effects even
22 under faulted conditions.

23 "The TRD also gives the design requirements for
24 internal missile protection. Potential missile sources and
25 targets are to be determined after a review of the layout

1 of safety related structures, systems, and components has
2 been completed. This determination will be accomplished
3 through the use of safety system hazard analysis
4 drawings, which will identify missile sources and
5 unacceptable targets as well as other hazards.

6 Protection devices will be designed for damage evaluation
7 confirms the need for them.

8 "Prevention of pump impeller missiles is one
9 example of the implementation of the TRD criteria. Motor
10 driven pumps and compressors are driven by AC induction
11 motors that condition overspeed, thus decreasing risk of
12 generating a missile. It it should also be noted that
13 Quadrex'sG assessment of the Brown & Root response to
14 question C-9, cited in the above finding, does not in
15 fact support the finding. In that assessment, Quadrex
16 stated: 'It is evident that the structural discipline
17 was handling the missile penetration problem in accordance
18 with industry practice and the state of the art. TRD
19 1N209RQ013-A was reviewed and found to contain
20 comprehensive design criteria for determining and
21 protecting against internally generated missiles.'

22 "Quadrex also alleges in the above finding that
23 there was no evidence that the internal missile criteria
24 had been implemented into the design. This part of the
25 finding is also clearly unfounded. A careful review of

1 the project design records would have disclosed that the
2 internal missile criteria had been incorporated into
3 various aspects of the STP design to minimize missile
4 generation potential. inFinal corporation of the missile
5 criteria into the design would have been accomplished
6 based on the safety systems hazards program. The timing
7 of this activity is consistent with industry practice.

8 "Given the above facts, it is clear that Brown
9 & Root has adequately addressed the problem of postulated
10 internal missiles. Accordingly, the above Quadrex finding
11 is erroneous and will not impact plant licensability."

12 Q (By Mr. Sinkin) Let me just ask you to go
13 back, Mr. Goldberg and let's put into the record at this
14 point the particular sentences from that that -- well,
15 you've read the whole thing into the record. I can work
16 from the document.

17 Having reviewed that response by Brown & Root
18 to the Quadrex finding, Mr. Goldberg, is it your position
19 that the design activities associated with protection
20 against internal missiles had not yet commenced when
21 Quadrex looked at the Brown & Root program?

22 A I think that there were certainly foundation
23 documents that had existed, and I think that there was
24 already some consideration clearly in the procurement of
25 equipment. Put obviously, the total program had not been

1 completed.

2 Q My question is "commenced."

3 A I said, that there are indications clearly that
4 some parts of this have started.

5 Q And Brown & Root says at one point near the end
6 that actually the criteria had been implemented in
7 certain designs. Is that not correct?

8 A That is correct.

9 Q In your answer to question 49 at line 38 of
10 your testimony, I'd like to you review that answer again
11 in light of our discussion and ask you if you wish to
12 make any changes or modifications or comments upon that
13 answer, as to why this particular deficiency was not
14 potentially reportable.

15 JUDGE BECHHOEFER: Line what?

16 MR. SINKIN: Page 38, line 23, question and
17 answer 49.

18 A No, I do not wish to change. What we were
19 reflecting on in this answer to this question dealt with
20 a hazards analysis that has to take place after you
21 basically have your plant laid out and you've now got
22 your sources and your targets well defined. That is the
23 part of the missile protection program that to the best of
24 our knowledge hadn't commenced. And that's what we were
25 thinking of when we wrote this answer.

1 Q Let me ask you to turn to Applicant Exhibit 60,
2 Volume II, Question C9. Going down to the Quadrex
3 assessment.

4 Apparently what disturbed Quadrex at the very
5 end of that assessment is that they asked the stress
6 group for a response on this issue and they were unable
7 to produce one or did not produce one for some reason.
8 Does it bother you at all that the stress group could not
9 produce for Quadrex what was requested?

10 MR. AXELRAD: Mr. Chairman, there is no
11 foundation for that question. The question does not say
12 that they were unable to produce it. All it says are
13 Quadrex did not receive the response.

14 Q (By Mr. Sinkin) Well, apparently Quadrex asked
15 the question and got no response. If there's some
16 problem with saying that the stress group didn't produce
17 a response, Quadrex asked the question and received no
18 response. Does it bother you at all that Quadrex could
19 did not get a response to this question?

20 MR. REIS: Mr. Chairman, I object to the
21 question from the point of view of relevance. What was
22 in Quadrex's mind and what they had here, I just don't
23 see it;s relevant to the issues in either contentions 9
24 or 10 and I'd ask counsel or representative for the
25 intervenor to enlighten me as to the what the relevance

1 is so that we can see the relevance.

2 JUDGE BECHHOEFER: I think the Board thinks
3 it's rather clearly relevant and I might say that the
4 staff has taken the position that that matter should have
5 been reported and I was going to follow up on that.

6 MR. SINKIN: You can respond to the question.

7 THE WITNESS: Would you repeat the question?

8 Q (By Mr. Sinkin) Apparently Quadrex asked a
9 question of Brown & Root and did not receive an answer
10 and the fact that the stress group did not produce an
11 answer led them to record that, "In particular," I'm
12 quoting now from that last paragraph, "In particular, we
13 did not receive a response from the stress group on the
14 second part of this question concerning how internal
15 missiles that were supplied by Brown & Root were
16 generated. Does the fact that Quadrex could not get a
17 response with -- from the stress group in any way disturb
18 you?

19 MR. PIRFO: Objection just to the "could not
20 get a response." He is continuously confusing that, he
21 did not get a response.

22 Q (By Mr. Sinkin) I'll be happy to change it to
23 "did not get a response."

24 A As I explained the other day, I think the time
25 constraints that we placed on this review resulted in a

1 number of situations whereby Quadrex was not able to get
2 all the information that they sought during this review.
3 So that situation I think is perhaps very much likely
4 related to the problem of the time constraints of the
5 review.

6 Q Did you find in the period that Brown & Root
7 was on the job and you were on the job that it was
8 relatively easy for Brown & Root to retrieve particular
9 design documents that were requested by other parties
10 like HL&P?

11 MR. AXELRAD: Mr. Chairman, I will object to
12 that question. That question certainly is irrelevant to
13 the matters before this proceeding. There is no issue
14 with respect to the easy -- with the ease with which
15 Brown & Root is able to retrieve materials from its files
16 and I do think we're getting into an area which is far
17 remote from the particular Quadrex findings which were at
18 issue here.

19 MR. SINKIN: I'll ask a foundation, Mr.
20 Chairman, and it may become more clear.

21 Q (By Mr. Sinkin) In your view, is it necessary
22 to an orderly design process to be able to retrieve with
23 relative ease the basic documents on which the design is
24 generated?

25 A I believe that that is a general feature of a

1 design program, to be able to retrieve necessary records.
2 That's correct.

3 Q Did you find that Brown & Root had that
4 ability?

5 A I haven't had all that much experience in
6 testing that ability with Brown & Root, to be very frank.
7 I don't recall personally ever asking for information
8 that I wasn't able to get. As far as the timeliness, I
9 never made any special accounting of that. I had no
10 reason, in a general sense, to believe that they were
11 difficult to obtain information from.

12 Q Did you do any particular analysis of the
13 questions where Quadrex did not receive a response, to
14 assess for yourself or for HL&P, whether that was a
15 result of the time constraints or a result of an
16 inability of Brown & Root to retrieve documents?

17 MR. AXELRAD: Again, Mr. Chairman, I will
18 object. We're going beyond the particular Quadrex
19 findings which are at issue here. The Quadrex report is
20 hundreds of pages, hundreds of findings, the Board that
21 has specifically identified some generic findings, some
22 discipline findings which are to be litigated in this
23 proceeding. And I don't believe that CCAMP should be
24 permitted to address general questions with respect to
25 general aspects of those Quadrex report other than those

1 that pertain to the specific findings at issue here.

2 MR. SINKIN: I believe the wording of the
3 contention says or the whole report so that whether the
4 entire report should have been turned over is also at
5 issue in this proceeding.

6 MR. AXELRAD: Mr. Chairman, if that particular
7 issue is to be allowed, to have exploration into every
8 generic -- every finding in the Quadrex report and to
9 every question and answer in the Quadrex report, we've
10 three volumes to be considered here, we're never going to
11 have this hearing completed. Obviously, to put forth
12 that particular issue with is with respect to whether or
13 not the report as a whole should have been reported
14 because of its overall thrust, not as to whether or not
15 any individual aspects such as whether or not information
16 could be retrieved, is going to be heard in this
17 proceeding with respect to any number of these findings.

18 MR. SINKIN: Mr. Chairman --

19 JUDGE BECHHOEFER: I think we'll sustain that
20 objection. But it's a little bit remote from the -- the
21 particular findings on the report, itself.

22 MR. SINKIN: I did have a response to what Mr.
23 Gutterman said but I was waiting for you all to finish,
24 if I could but the that in the record.

25 JUDGE BECJJPEFER: Okay.

1 MR. SINKIN: If the question is whether the
2 entire report should be turned over and if there are
3 significant indicators in the report that the design
4 process of Brown & Root is not being conducted in an
5 orderly fashion, it would be our intention to argue that
6 that is one basis on which the entire report should have
7 been turned over. And that's precisely what I was
8 getting at with this line of questioning.

9 MR. AXELRAD: But Mr. Chairman, Mr. Sinkin had
10 ample opportunity to identify what those features of the
11 report which he wanted to litigate during the time that
12 we were delineating the issues to be considered. There
13 are now delineated/ten generic findings to be litigated
14 and I don't know -- and 16 discipline findings.

15 And Mr. Sinkin attempted to get other findings
16 included within the matters to be litigated and that was
17 denied. And with respect to the matters he's trying to
18 argue about now, he didn't even identify those and didn't
19 even argue that those should be included. We're not
20 going to be able to finish this hearing at any time if
21 we're going to have to go through everything that now Mr.
22 Sinkin wishes he had identified a few months ago as
23 matter to be litigated.

24 MR. SINKIN: The question was which particular
25 findings would be addressed specifically as to whether

1 they should have been notified pursuant to 50.55(e). I
2 am not saying that this finding necessarily is the line
3 of questioning I'm talking about, that finding 4.1.2.1(b)
4 which is an identified finding, should be or should not
5 be reported. I'm saying what does the fact that a
6 question couldn't be answered when they were trying to
7 make that finding indicate about whether the process was
8 orderly or not. And that goes to the broader question of
9 should the entire report be turned over.

10 JUDGE BECHHOEFER: Well, the question you just
11 described when I was announcing our ruling, which will
12 stay the same, but we were saying that you could use
13 4.1.2.1(b) as the elements in that as the basis for
14 questions because that is an identified finding.

15 MR. SINKIN: Then I'll do that.

16 Q (By Mr. Sinkin) In terms of 4.1.2.1(b), Mr.
17 Goldberg, did you make any effort to determine whether
18 the stress group had not provided a response to Quadrex
19 because of the time constraints or whether it was because
20 of their inability to find the documents Quadrex wanted?

21 A It's my understanding that this item, as well
22 as a number of other items, are the areas where we were
23 unable to close the gap. And I believe that the time
24 constraints were predominately responsible for that
25 problem.

1 Q Why do you feel you were unable to close the
2 gap?

3 A That Quadrex had raised a number of questions
4 for which they didn't always get answers from Brown &
5 Root. And we believe that part of the reasons for that
6 were the facts that they were working under a rather
7 tight time constraint and the opportunities to revisit
8 with the people with whom the questions were left, were
9 few and far between. They had a lot of ground to cover
10 and very little time in which they were trying to cover
11 the ground.

12 Q But did you make any specific inquiry as to
13 whether the reason this one was not responded to?

14 A I personally can't recall whether we made
15 specific inquiry. The reviews took place four and-a-half
16 years ago and I just can't begin to imagine exactly what
17 inquiries were made or were not made at this late stage.

18 Q Did you set up a process of identifying where
19 the gap was not closed and going and seeing if what the
20 reason was for the gap not being --

21 A I don't believe so, no.

22 Q Thank you.

23 Let me get those pages.

24 JUDGE BECHHOEFER: Are you still on four
25 4.1.2.1.(b)? I have a couple of follow up questions, if

1 you're through.

2 MR. SINKIN: I'm about to leave it so go right
3 ahead.

4 JUDGE BECHHOEFER: Mr. Goldberg, given your
5 testimony that you were lacking certain information as to
6 this particular finding -- as to this particular finding,
7 why would you not have considered that as a potentially
8 reportable finding subject to later confirmation or
9 disapproval as the case may be.

10 MR. AXELRAD: Mr. Chairman, may I ask the
11 chairman to clarify that question, because you started
12 off with, "Given that you did not have that information."
13 I don't think the record shows that Quadrex did not have
14 the information at the time they wrote the Quadrex
15 report.

16 JUDGE BECHHOEFER: At the time on May 7, I'm
17 assuming that Mr. Goldberg did not have full information
18 inasmuch as Quadrex also had not full information.

19 MR. AXELRAD: Well, what I'm saying is, I'm not
20 sure that's been testified to in those terms. Perhaps --

21 JUDGE BECHHOEFER: You may want to clarify
22 that, Mr. Goldberg.

23 THE WITNESS: The reason why I don't believe
24 this was potentially reportable, and apparently I'm
25 speaking, I would think, for the other two gentlemen that

1 participated in the review because we worked together on
2 this, is that protection for missile generation is an
3 activity that more times than not occurs relatively late
4 in the design process.

5 You must have fairly good definition of
6 machinery arrangement, because rotating machinery
7 represent sources and you then have to know where are the
8 things that could be affected by missiles which we call
9 the targets. And Brown & Root's activities at that stage
10 of the design unfortunately had not progressed very far;
11 so the absence of a missile hazards analysis at that
12 juncture wasn't from my view a serious problem. It was
13 serious from the point of view of work remaining to be
14 done but I did not foresee that as any kind of an issue
15 that would require reportability to the NRC.

16 I could not envision a threat to the operation
17 of the plant for an activity that hadn't even been
18 undertaken. It wasn't a case of the activity not being
19 considered, just hadn't been accomplished.

20 JUDGE BECHHOEFER: Have you had a chance to
21 look at the staff testimony, the testimony of Mr. Taylor,
22 on this subject?

23 THE WITNESS: Yes, sir.

24 MR. AXELRAD: Could we show that testimony --

25 JUDGE BECHHOEFER: Page, 37, yes, you may, Page

1 37, answer 103 on page 37.

2 THE WITNESS: Yes, sir.

3 JUDGE BECHHOEFER: Well, first, I note that Mr.
4 Taylor mentions that it's a close call. Is that the kind
5 of item that you would regard as a close call?

6 THE WITNESS: I don't think it's as close to
7 the wire as obviously Mr. Taylor does. I think we have
8 some difference in judgment on this point. I don't see
9 it as a close call. I respect his judgment in the
10 matter. These are matters that do require some judgment.

11 JUDGE BECHHOEFER: Is this the kind of item
12 that the -- I would have to -- I don't have this right in
13 front of me, but the staff, the I&E guidance, mentions
14 that if there are unanswered questions for more than
15 about 14 days, I think, and certain elements of
16 reportability of present, the item should nevertheless be
17 reported as a potential deficiency. Are you aware of
18 that criteria?

19 THE WITNESS: Yes, sir. And I believe that the
20 threshold as to when you even have enough information to
21 start the 14 days is also a question. The mere fact that
22 you have stumbled on to a question, it follows that you
23 have to have enough substance to the matter to even begin
24 the process of an evaluation for reportability.

25 When this one was examined, and the connotation

1 was that the design work associated with missile
2 protection had not been completed, they were elements of
3 it that had not been undertaken, we did not view that,
4 given the state of design, constitute a concern of that
5 caliber.

6 There was no question in our mind that this
7 would not go unnoticed. Quadrex review in addition to
8 the existing knowledge of the people on the project
9 served to highlight that this was an area for which the
10 work had not yet been undertaken.

11 So I don't think the absence of work that has
12 yet to be performed and for which there are very
13 practical points in time where it can be performed
14 constitutes the kind of a problem that would end up being
15 reported to the Nuclear Regulatory Commission.

16 JUDGE BECHHOEFER: So you don't think the 14
17 days period would have started to run on this question at
18 all?

19 THE WITNESS: No, sir.

20 JUDGE BECHHOEFER: I guess that's all I have on
21 that.

22 Q By Mr. Sinkin) Mr. Goldberg, in the Brown &
23 Root assessment that you read into the record, it states
24 that a careful review of the project design records would
25 have disclosed that the internal missile criteria have

1 been incorporated into various aspects of the STP design
2 to minimize missile generation potential. Do you know
3 what aspects of the design --

4 MR. AXELRAD: Mr. Chairman, if Mr. Sinkin is
5 going to start asking questions again based upon the two
6 pages that he took away from the witness, I think he
7 should give him the two pages back.

8 MR. AXELRAD: And where are you reading from,
9 Mr. Sinkin.

10 MR. SINKIN: The sentence beginning "A careful
11 review" on the second page of the document, in the Page
12 2-7 in the next to the last paragraph, sentence beginning
13 "A careful review."

14 Q (By Mr. Sinkin) Have you had a chance to read
15 that sentence?

16 A Yes, I have.

17 Q Can you tell me which aspects of the STP design
18 the criteria had been implemented into?

19 A As best I can determine from the Brown & Root
20 summary, its response, in this particular document, they
21 indicated that they had incorporated criteria into the
22 selection of the materials used in pumps, selection of
23 the motor drives, to minimize overspeed; they seemed to
24 have incorporated missile generation consideration in the
25 selection of the sources.

1 Q Mr. Goldberg, when you were sitting down with
2 your review team on May 8 and going through -- you went
3 through all three volumes of the Quadrex report, did you
4 not, while you were there on May the 8th?

5 A We had all three volumes, yes.

6 Q And you were making determinations on what
7 might be potentially reportable, were there times when
8 your feeling was it was a judgment call, you weren't
9 quite sure and you might come back to it later?

10 A There were some items, as I recall, that we had
11 to make sure we had all the information needed for the
12 call. Mr. Robertson and Dr. Sumpter had brought
13 considerable information back from their meeting. I
14 can't say with certainty, but I think there were items
15 when we needed to make some phone calls to make sure we
16 had all the information or that we had a particular
17 question, perhaps, that someone else needed to give us
18 some insights to in order to make the call.

19 For example, I remember specifically I was
20 talking with Mr. Saltarelli on the subject that the
21 shielding calculations, and we did not agree. But
22 nevertheless, we chose to put that in the potential
23 reportability category.

24 When I spoke to him with respect to the
25 potential reportability on the computer program

1 verification, he didn't agree but the strength of
2 disagreement was not quite the same as with the shielding
3 calculations. I think he felt we were unduly
4 conservative, but nevertheless we had that dialogue. And
5 I'm sure there were some other more detailed facts on
6 certain other issues that perhaps Dr. Sumpter or Mr.
7 Robertson may have called people to get additional
8 information. I'm not sure. There was a lot of activity
9 going on in that particular day.

10 Q So on an item like the shielding calculations,
11 you would interrupt your review to call Mr. Saltarelli,
12 get some information and then return to your review?

13 A No, that particular conversation occurred at
14 the completion of our review when I had specific areas of
15 disagreement on matters of report reportability and I did
16 discuss those with Mr. Saltarelli.

17 Q And the computer code decision, that take place
18 in the midst of or after --

19 A As far as the discussions with Mr. Saltarelli,
20 they also occurred after we had undertaken to review all
21 the most serious discipline findings.

22 Q Were there occasions when you would interrupt
23 the review to make other inquiries and then come back to
24 finish that particular section?

25 A Yes, there were.

1 Q Did you make any notations in the copy of the
2 Quadrex report you were using as to whether you had some
3 judgment call questions?

4 A I didn't make any marks that I can recall in my
5 Quadrex report.

6 Q You made no remarks at all that you recall?

7 A I believe that I -- I had a copy of Mr.
8 Saltarelli's input, and I may have made some notations on
9 that.

10 Q Do you still have the copies of Mr.
11 Saltarelli's input on which you made notations?

12 A I don't have it. As a matter of fact, I looked
13 for that document and I've moved two separate times and I
14 don't have that document. Somebody else may have it but
15 I don't have it.

16 Q Mr. Goldberg, on page 41 of your testimony, I'd
17 like you to review question and answer 57.

18 Have you done that?

19 A Yes.

20 Q In the last sentence of your answer, you state
21 that since these preliminary data are carefully
22 controlled to assure they are later finalized and
23 verified, their preliminary use does not represent a
24 deficiency. Am I to understand by that statement simply
25 that their use does not represent a deficiency as opposed

1 to if there is a deficiency, in that preliminary data,
2 that might lead to notification?

3 Let me rephrase the question. Is it your
4 position that a defect in design data where that data has
5 been used for construction is not reportable if a design
6 verification will be conducted later?

7 A I would answer your question by saying that if
8 you use preliminary data and it is clearly identified as
9 preliminary data, and in a subsequent analysis and
10 ultimate design, you have used that data and you have
11 issued that design for construction and it turns out that
12 that design is later found to be defective and if it had
13 gone uncorrected, it would have posed a threat or an
14 adverse condition to the safe operation of a plant, you
15 might well have a reportable situation.

16 Q Let's focus on that if it would have been
17 uncorrected. Is there a general presumption that design
18 verification will catch errors in data calculations?

19 A There is, as part of the design process, a
20 hardening up of those loads. Taking the case of the
21 number being a load, and when you get that final
22 information, if it establishes that you in fact have an
23 unacceptable design, then you're locked into reviewing
24 the consequences as it might -- as it might lead to a
25 reportable situation.

1 Q I guess what I'm after, is if for some reason
2 you learned that there was -- there were data that was
3 unconservative that had been used for construction but
4 that data had not yet been verified, would there be an
5 assumption that the verification would catch that error
6 and therefore, there would be no need to notify the NRC
7 of that error?

8 A And the data that we're talking about is
9 identified as preliminary data?

10 A It's identified as preliminary data, it's been
11 issued, it's the basis of an item constructed; through a
12 process other than the final design verification, it has
13 been identified that that data is unconservative, would
14 the fact that there's still a pending final design
15 verification influence your decision on whether that
16 unconservative data should be notified to the NRC?

17 A I think the problem with the example you gave,
18 Mr. Sinkin, is that at some point, the data will be
19 designated other than preliminary. And the analysis
20 performed using data other than preliminary data will
21 undergo normal design review and verification. As far as
22 trying to relate whether or not what was constructed,
23 whether what was constructed is adequate in light of
24 change to the number from preliminary to final, that will
25 have to be evaluated on a case basis as to whether it

1 will constitute a reportable problem.

2 Q Perhaps I'm not stating my question clearly
3 enough to get to the point I want. Let's do point A, B,
4 C.

5 We know that this is data that's been
6 developed, been issued, used as the basis for
7 construction. Point A, construction is completed. Point
8 B, through a process other than final design
9 verification, the data is identified as unconservative.
10 Point C would be final design verification. Is the fact
11 that there will be a point C, that there must be a point
12 C, it's safety related, it will be verified, does that
13 influence your decision as to whether to make a
14 notification at point B?

15 A It would not exclude the possibility that the
16 change at point B could constitute a matter for
17 reportability.

18 Q It would not exclude that possibility.

19 A It would not exclude that possibility.

20 Q But the existence of a final verification at
21 point C might influence whether you would actually
22 notify?

23 A I say it could. I don't think you would have a
24 situation when it would be true in either case either
25 way.

1 Q Can you postulate a case for me where it would
2 not be true, in other words he -- let me make that clear.
3 Can you postulate a case for me where you reached point B
4 and through some process other than final design
5 verification, design data had been identified as
6 unconservative, now there's going to be a final
7 verification but at point B you make a decision not to
8 report it.

9 Q Let's take a case where an engineer has a
10 device or he has a design which will create a device, for
11 which he hasn't received all the information necessary to
12 assure himself that that device will carry out its
13 intended function. Owing to the construction plan, if
14 you find yourself in a situation where if we are to
15 install the device in an efficient time frame, we need to
16 install it before he's completed all of his
17 deliberations.

18 If you control the process so that that device
19 is identified beforehand as being of final confirmed
20 adequacy and you release it for installation on what's
21 called, say, a risk release which is terminology often
22 used on these projects, and you therefore have conscious
23 control of the item that is not going to be overlooked as
24 subsequent activities ensue.

25 If at a later date it's found that you cannot

1 confirm that device to be adequate, I would not not
2 consider that to be reportable even given the other tests
3 for reportability because it was installed knowingly with
4 an uncertainty; there was a control placed on that
5 process, with a record to show that it is uncertain and
6 the only way that record can be cleared would be either
7 to complete the confirmation or in the absence of being
8 able to do so, replace it with another device that will
9 satisfy the service requirements.

10 Q There is an HL&P quality assurance QA
11 department, correct?

12 A That's correct.

13 Q In that department, are there engineers?

14 A Yes, there are.

15 Q If one of those engineers was out in the field
16 looking at a device that had been installed and had a
17 question in his or her mind about whether the device was
18 adequate, and went to review the package, the design
19 package that had led to that device and found what he or
20 she considered to be an unconservative data base that led
21 to that, even though it's got a tag on it that says "risk
22 release," would you expect the quality assurance person
23 to write a report pursuant to quality assurance
24 regulations on that discovery?

25 A It would depend. If that person had gone back

1 to understand the bases for the risk release and if it
2 coincided with the areas that he recognized had
3 uncertainly, chances are he would not.

4 Q So the risk release tag on a given item,
5 however that tag is put on the item, will identify
6 certain areas of the design that still have an
7 uncertainty that will later be finished but other areas
8 may already be finished?

9 A The tag, itself, would not give you that kind
10 of detail. The tag has an identity and you'd have to go
11 back to the log for the identification as to what was the
12 basis for the risk.

13 Q So if the inadequate data that my hypothesized
14 quality assurance person found in the design package did
15 not relate to the specific area as identified in the risk
16 release document, then you might have a quality assurance
17 deficiency?

18 A I'm certain that that person would probably
19 write a non-conformance report to identify the existence
20 of that concern.

21 MR. SINKIN: Mr. Chairman, I thought I'd check
22 with you as to how far we go. I'm entering an area
23 that's going to be quite lengthy. I can do part of it
24 and continue later on, or I can stop now.

25 MR. AXELRAD: Why don't we adjourn, Mr.

1 Chairman and let Mr. Sinkin start his new area of
2 croxx-examination up Monday afternoon I guess.

3 JUDGE BECHHOEFER: We can go either way. I do
4 have one follow up question. Might as well finish it.

5 Of this question of 4.5.2.1(b), actually,
6 talking about which we have been talking, was there a
7 risk release tag or something comparable on the document
8 which this seems to refer to, which this finding seems to
9 refer to? The document which contains preliminary loads,
10 which were used as the basis for construction?

11 THE WITNESS: I used an example of hardware
12 that was manufactured. This particular situation is a
13 little bit different in that EDS, as I recollect, was
14 designing some pipe break restraints. And they supplied
15 the loads at the connection points of the restraints,
16 because Brown & Root was designing the structure to which
17 those restraints would attach.

18 So Brown & Root's input would show the loads
19 received from EDS and identified as preliminary loads.
20 So all the ensuing design work would have a preliminary
21 character that it could not be considered a final
22 analysis because it was still based on a preliminary
23 input.

24 JUDGE BECHHOEFER: Was there such a preliminary
25 indication on the documents that were being used?

1 THE WITNESS: To the best of my knowledge, the
2 identification of preliminary loads was conspicuous on
3 the Brown & Root calculations.

4 JUDGE BECHHOEFER: That's what I wanted to find
5 out.

6 MR. SINKIN: I have a follow up, judge. Do you
7 have a question?

8 JUDGE BECHHOEFER: That's what I wanted to find
9 out. No.

10 Q (By Mr. Sinkin) Turning to question C4, in
11 volume two of the Quadrex report, Applicant Exhibit 60,
12 I've asked you to review the Quadrex assessment.

13 Q Have you had a chance to review that?

14 A Yes.

15 Q The Quadrex states in this assessment that
16 typically, architect engineers have interdiscipline
17 interface problems with preliminary information and
18 changing design. At this point on South Texas nuclear
19 project, we're talking May of 1981, that period, January
20 to May, 1981, was Brown & Root doing its design and
21 engineering work that it was sending out to construction
22 to a great extent based on preliminary information and
23 changing design, and then you answer one and the other,
24 preliminary information and the changing design.

25 A I think there was a considerable amount of work

1 that was in progress based on preliminary information.

2 I would like to add one point, that anything
3 short of final, is preliminary.

4 Q That goes back to our discussion of what is a
5 final design. But for purposes of 50.55(e), I think we
6 agreed there's a different definition.

7 A Well, when you are asking the questions, it's
8 hard for me to focus on what frame of reference you're
9 speaking.

10 Q Just so we have those two frames in mind, when
11 you just stated that anything short of final is
12 preliminary, I think you were using that original
13 definition you gave me that says until a final design is
14 signed off and no further work is going to be done,
15 that's not a final design. Is that correct?

16 A That's correct.

17 Q In this particular question, Quadrex found that
18 the -- that when they checked the design of the secondary
19 shield wall, Brown & Root had indicated the design was
20 controlled by compartment pressurization and that they
21 had received this input from NUS. It's Quadrex's
22 position on the second page of their assessment, that
23 Brown & Root should have reviewed before acceptance the
24 dynamic amplification factors supplied by NUS. Do you
25 agree that Brown & Root should have reviewed that before

1 accepting it?

2 A I would not categorically say they had to
3 review it. I would say this: NUS was under contract to
4 Brown & Root to perform certain technical services as a
5 subcontractor to Brown & Root. Brown & Root bears the
6 responsibility for the technical adequacy of the design,
7 including the work of its subcontractors.

8 Under that arrangement, Brown & Root has to
9 exercise some form of review of its subcontractors work.
10 It doesn't follow, necessarily, that the review has to be
11 a hundred percent. The fact that this particular item
12 was not reviewed by Brown & Root in itself would not make
13 a case for some form of misconduct.

14 Q Well, when we talked earlier about the
15 verification of design inputs, you distinguished between
16 two things, one if you have a design input from one
17 discipline such as electrical on the horsepower needs of
18 a particular motor, to another discipline mechanical, it
19 would not be reasonable to expect mechanical, unless it
20 was a glaring error, to go back and verify that the
21 horsepower selected by electrical was correct. That's
22 one kind of input review. But that if in the second
23 discipline, discipline receiving the input, there were
24 personnel qualified to understand the analysis done by
25 the first discipline, then it would not be unreasonable

1 for them to verify that input if they perceived certain
2 problems.

3 A It would certainly not be unreasonable. I
4 think I mentioned in a response to an earlier question
5 that where a designer is in a position to review the
6 adequacy of data being supplied to him as input, to judge
7 its reasonableness before he undertakes whatever work
8 he's planning to pursue, that's just good practice,
9 because clearly if he is able to discern any problem,
10 he's in a position to get that particular matter resolved
11 and avoid possibly a lot of work that will ultimately
12 perhaps have to be repeated.

13 To the extent, though, that I answered the
14 earlier question, moments before, the amount of
15 verification work on the part of Brown & Root with regard
16 to NUS would not necessarily require a hundred percent.
17 And it's hard on an isolated case basis to make the hard
18 case that they were remiss for not checking this
19 particular thing.

20 Q In your view, they were not remiss for having
21 checked this particular one or it's hard to make the case
22 that they were remiss?

23 A It's hard to make the case on the basis of a
24 single observation, that they were remiss.

25 Q Going to the last part of the Quadrex

1 assessment, the final sentence, "Brown & Root applied
2 this load for all structural steel inside containment
3 which is a very conservative assumption, but applied it
4 only in the vertical direction contrary to EDS's
5 instructions."

6 As I read that, Brown & Root failed to follow
7 the instructions from EDS on how this load should have
8 been applied. Is that how you read that?

9 A That's what it says.

10 Q So that the containment structural -- the steel
11 inside -- the structural steel inside containment was
12 installed without following the load assumptions provided
13 by EDS; it was actually -- they went ahead and installed
14 it.

15 MR. AXELRAD: Mr. Chairman, I do not see in
16 that particular sentence the foundation for Mr. Sinkin's
17 assumption that it was installed.

18 MR. SINKIN: I may be able to short circuit
19 this, maybe not.

20 Q (By Mr. Sinkin) Do you know, Mr. Goldberg, do
21 you know for a fact whether Brown & Root had installed
22 structural steel inside containment following EDS's
23 instructions on the load that steel should have?

24 Let me just ask you, do we not have a picture
25 right below the finding of structural steel actually

1 installed inside containment?

2 MR. AXELRAD: I believe that the photograph
3 that is attached as shown in the next to the last
4 sentence at the bottom of Page 1 refers to a design of
5 the secondary shield wall. If you look at the bottom
6 three lanes on the first page of this question and
7 answer.

8 Q (By Mr. Sinkin) Is the secondary shield wall
9 inside containment, Mr. Goldberg?

10 A Yes, sir, it is.

11 Q So that if that is a picture of the secondary
12 shield wall, it's a picture of structural steel inside
13 containment, is it not?

14 A This picture is of reinforcing steel and I'm
15 just trying to get my bearings here and see if it's what
16 they're advertising in it on page one.

17 Q I don't want to get hung up in the picture, Mr.
18 Goldberg. It's not absolutely essential. The statement
19 by Brown & Root is -- by Quadrex is Brown & Root applied
20 this load for all structural steel inside containment.
21 In May of 1981, had Brown & Root installed a substantial
22 amount of structural steel inside containment?

23 MR. AXELRAD: Mr. Chairman, at this point, I
24 would like to object to the question. We're going well
25 beyond what the particular finding by Quadrex that we

1 were discussing and is an issue in this proceeding. The
2 particular finding is: EDS did not perform a design
3 review or design verification of preliminary loads
4 transmitted to Brown & Root. These loads however have
5 been used as a basis for plant design. That particular
6 finding, although it identifies a reference to certain
7 questions, references only the portion of the questions
8 that pertain to this particular finding. It does not
9 pertain to whether or not Brown & Root used criteria
10 contrary to EDS's instructions, whether or not structural
11 steel had been installed improperly, it deals with the
12 one very specific question, whether or not EDS's design
13 review or design verification was transmitted to Brown &
14 Root. And we're going well beyond that by this excessive
15 questioning with respect to a portion of question C4
16 which does not relate to this finding.

17 MR. SINKIN: I think the finding, itself,
18 clearly references EDS's work, they don't review it, they
19 give it to Brown & Root, Brown & Root uses it in a design
20 and here's the results as documented in the questions
21 referenced in the finding. If we're going to be parsing
22 down to particular sentences in questions as to which
23 which ones are or are not under a given finding, it's
24 obviously relevant.

25 MR. AXELRAD: Mr. Chairman, portion of question

1 C4 that's relevant to this particular finding is clear
2 and it does not relate to that last portion of that
3 question C4.

4 JUDGE SHON: EDS was designing primarily pipe
5 supports. Is that right?

6 THE WITNESS: They were primarily involved in
7 the design of pipe whip restraints.

8 JUDGE SHON: Pipe whip restraints. there is a
9 particular. I don't have the -- We have don't have the
10 second volume.

11 THE WITNESS: All I have for a picture, Judge
12 Shon, it is some reinforcing steel and I couldn't begin
13 to tell you where it was located.

14 MR. AXELRAD: Mr. Chairman, just to make sure
15 that my objection is understood, let me just state it one
16 more time. What we are litigating in this proceeding is
17 whether or not HL&P should have reported under 50.55(e) a
18 specific finding, 4.5.2.1(b). And what that finding is
19 that EDS did not perform a design review or design
20 verification of preliminary information transmitted to
21 Brown & Root. Our answer to that finding our discussion
22 of that finding indicates why HL&P did not believe that
23 that was a reportable matter.

24 Now, the question that Mr. Sinkin is now asking
25 deals with an unrelated portion of question C4 which

1 alleges that Brown & Root applied a load differently than
2 the way EDS instructed them to. Now, that may or may not
3 be true; it may or may not be the case. But it's not a
4 part of this particular finding and I really -- I object.

5 MR. SINKIN: I would --

6 MR. AXELRAD: May I finish? And I really
7 object to extending this finding and a discussion of the
8 finding and a discussion of anything that's in the
9 Quadrex report including question C4 to anything other
10 than than how it supports the particular finding that's
11 under dispute here.

12 MR. SINKIN: I would like to respond. But I
13 need the volume.

14 JUDGE BECHHOEFER: The Board has noted that C4
15 is referenced as just C4 and not the last sentence or the
16 first sentence and that it all appears in one paragraph
17 of C4, as far as I can see.

18 MR. AXELRAD: You have to read the finding, Mr.
19 Chairman. There are a number of things in C4. There
20 were a number of things in MA. What Quadrex did is it
21 made certain findings and making those findings has
22 relied on portions of various questions and answers and
23 assessments. And the reference, it didn't try to pars 4C
24 one or paragraph two. It obviously referred people to
25 question C4 for the material in question C4 which is

1 pertinent to this finding. It's not an ambiguous
2 finding, the finding is very, very clear and the finding
3 is what we're litigating here. No one has -- well, there
4 was no suggestion that we should be litigating anything
5 else under this finding has happens to appear in volume
6 three of the report, even though it happens to be
7 referenced.

8 MR. SINKIN: Let me start with the finding,
9 itself. The finding, itself, says EDS did not perform a
10 design review or design verification of preliminary loads
11 transmitted to B&R. These loads have however been used
12 as a basis for plant design. I read that as design which
13 has been completed, is in process, has been used for
14 construction. They make no distinction between loads
15 that have been used in some other design but not -- if
16 you understand my distinction. The design is referred to
17 as the plant design. And they reference question C4. In
18 which the loads were used not only in the design but to
19 actually install. And state that the load for all
20 structural steel inside containment, this design load
21 criteria was applied. But only in one direction. Not in
22 the other direction as EDS had required. We find that to
23 be directly related, it's all of a piece, with the
24 finding. There is no separation out in question C4 of
25 any particular element.

1 Secondly, I think we need to be very careful
2 with this ruling. Because the Applicants are now opening
3 up a can of worms, where if the finding references a
4 particular question, even though Quadrex never said it
5 was only referencing part of the question, they will now
6 have the ability to argue in every question, "No, the
7 Quadrex finding doesn't reference that sentence." And we
8 don't think that's a good ruling to put into this
9 proceeding at this time because it is opening a can of
10 worms as to which paragraph, which sentence, which word
11 in a given question did Quadrex refer to in the finding.
12 The alternative is you don't look at the question. Which
13 obviously was not the process that was pursued in
14 deciding whether these were potentially reportable or
15 not.

16 MR. REIS: I would just say the question is
17 whether we're opening a can of worms or closing a can of
18 worms. From -- I don't know, I can't tell from the
19 photograph here, it seems to be all -- doesn't seem to be
20 structural steel, seems to be all reinforcing steel. I
21 can't tell from this, I don't think this line is
22 productive. I don't think it's relevant; I don't know
23 were we're going because I can't even tell whether it's
24 an economic question, because there's too much structural
25 steel or a safety factor that we're worried about. But

11829

1 the photograph here seems to show a lot of structural,
2 from the way I can see and it's very hard to read a Xerox
3 of a photograph.

4 And I don't know what we're talking about at
5 this point. We're going back and forth and we just seem
6 to not be focusing on the particular issues is of what
7 was there any culpability in not calling to the staff's
8 attention this matter involving finding 4.5.2.1(b), and
9 if so what was the extent of that culpability. We seem
10 to be involving collateral issues.

11 MR. SINKIN: Mr. Chairman, I'd like to respond
12 to that, too. Suddenly a finding that is specifically
13 identified in your order and in the direct testimony
14 referencing questions that are specifically identified
15 has become a collateral issue, has become wandering a
16 field. All I'm reading is the actual words of the
17 Quadrex report that support the finding that Quadrex
18 made.

19 MR. AXELRAD: Mr. Chairman, may I just add one
20 thing before we get to that? Finding 4.1.2.1(b) F, on
21 page 4-6 of the record which is not a finding in
22 controversy in this proceeding, states: Brown & Root use
23 of input data from EDS for pipe rupture loading may not
24 be adequate (see question C4 and C15.) No pipe rupture
25 loads have been determined for outside containment.

1 That's an example of questions C4 also being
2 used as support for another finding and in fact, may be
3 the very portion of question C4 that Mr. Sinkin is now
4 trying to discuss here.

5 MR. SINKIN: Could I have that reference,
6 please.

7 MR. AXELRAD: 4-6, finding 4.1.2.1(b) F. What
8 I'm trying to say, Mr. Chairman, is that question C4 and
9 other questions are used as support for many findings.
10 The only findings that we are litigating here are the
11 findings that have been explicitly put into controversy.

12 JUDGE SHON: Go ahead. I didn't mean to
13 interrupt.

14 MR. AXELRAD: And that particular portion of
15 question C4 that Mr. Sinkin is trying to get us to
16 discuss further is not part of the support for the
17 particular finding that's being litigated here.

18 MR. SINKIN: I would like to respond to that.
19 4.1.2.1 F deals with pipe rupture, it does not deal with
20 structural steel. Excuse me. It deals with -- okay.
21 Wrong. More to the point. There's nothing that says one
22 question can't be support for more than one finding.
23 That happens throughout -- that happens throughout the
24 Quadrex report, where they will take the same information
25 found in a given question and use it to support more than

1 one finding in the finding section. That's not unusual.

2 JUDGE SHON: Mr. Sinkin and Mr. Axelrad, it
3 seems clear to me that Mr. Axelrad's position is a pretty
4 well supported one. Now, the engineering of the thing is
5 that question C4 deals with two different things, one is
6 the 130 killipound load and unless I'm mistaken, perhaps
7 Mr. Goldberg could help on that, that is a pipe whip
8 loading, isn't it.

9 THE WITNESS: I believe it is.

10 JUDGE SHON: That 130 pipe jip loading was only
11 applied in one direction and obviously a pipe can whip in
12 any direction and so they made a mistake. That one is
13 the finding -- supports the finding about pipe whip
14 loading. The other statements in answer to the same
15 question supports the findings concerning the fact that
16 they had never verified their loadings before they turned
17 them over to Brown & Root. And Brown & Root went ahead
18 and used them anyway. They seem to me two distinct
19 things.

20 MR. AXELRAD: That's exactly the point.

21 MR. SINKIN: I can tie them together for you
22 Judge Shon. The finding is concerned with the use of
23 unrified preliminary loads in final design or in design,
24 we won't open that can. This installation of structural
25 steel without using loads is what happens when you don't

1 verify what you get from them.

2 JUDGE SHON: It still seems to me they're two
3 clearly

4 two different things: One is you didn't verify
5 the design and we let that one into litigation here. The
6 other one is you used it wrong after you got it, and we
7 deliberately excluded that from litigation here. That's
8 the way it seems to me. I haven't consulted with my
9 other two colleagues here, but it just seems clear.

10 MR. SINKIN: What the result of that is that
11 you have an example, if this ruling is going stand, you
12 have an example of the Quadrex report of a design
13 provided by a subcontractor to Brown & Root that was used
14 inappropriately by Brown & Root to do something wrong and
15 it's clearly identified to HL&P that they did something
16 wrong, but we're not going to analyze whether that should
17 be notified to the NRC or not.

18 MR. AXELRAD: That's Mr. Sinkin's
19 characterization and presumably he can make that same
20 characterization of the other 250 findings that we're not
21 going to be litigating here. And if he had a basis for
22 litigating those 250 findings, that was the time, before
23 the Board and making that is arguments.

24 MR. SINKIN: So when we were defining the
25 findings that needed to be litigated, we also needed to

1 go into the questions cited in those findings and the
2 questions in the findings and specific paragraphs.

3 MR. AXELRAD: You're being limited to those
4 portions of the questions and answer that is supporting
5 the particular findings and not those that support some
6 other finding.

7 JUDGE BECHHOEFER: The staff --

8 MR. REIS: I was going say I think you have to
9 parse the question and see which parts of the questions --
10 I do think that in naming particular findings, we can go
11 to the questions. I have no question about that. But I
12 don't think it's every -- we have to parse the questions
13 to see what's relevant --

14 JUDGE BECHHOEFER: We're going to -- I'll
15 support my technical members, and we will sustain the
16 objection on the basis that Judge Shon just stated. When
17 we refer to the -- well, the questions that are referred
18 to in the findings, it at least should relate to that
19 portion of the question or the response that relates to
20 the subject matter of the finding. Here there seems to
21 be a fairly clear differentiation. We're not putting
22 this as an overall ruling for every one because there may
23 not be as clear a differentiation in other situations.
24 Here there is. So we will uphold it for this one. But
25 that doesn't mean that generically, we'll say that every

1 question has to be parsed sentence by sentence.

2 MR. SINKIN: Let me try a different area.

3 MR. AXELRAD: Mr. Chairman, may I suggest --

4 MR. SINKIN: This is one last --

5 MR. PIRFO: The Board has ruled and I believe --

6 we're now approaching 1:00 o'clock and this was

7 originally to a follow up to a board question.

8 MR. AXELRAD: I was just going to suggest, I

9 thought that Mr. Sinkin was going to ask another question

10 and I would really suggest that we have been in hearing

11 for quite a time and that it might be better to recess.

12 JUDGE BECHHOEFER: This is just a follow up.

13 MR. SINKIN: It will probably lead to

14 arguments, so let's recess.

15 JUDGE BECHHOEFER: We'll recess until 9:30 on

16 Monday, except for limited appearance, which we will be

17 back in session for at 2:00 o'clock. We will be in this

18 room unless it appears that there are more people around

19 than this room can handle and in which case we'll move

20 next door. (Luncheon recess.)

21

22

23

24

25

P R O C E E D I N G S

JUDGE BECHHOEFER: Good afternoon, ladies and gentlemen. This session of the hearing on the proposed operating licenses for the South Texas facility will be devoted to limited appearances by members of the public. Each person who wishes is allowed to make a statement concerning the plant. And normally -- and those statements can be either orally, before us, or in writing.

Those statements are not evidence as such, but they can be taken into account by the Board in terms of asking the parties one or more of the parties, to address particular issues, if the particular issues warrant that treatment. Otherwise, the Board will take into account the views of various parties. Various limited appearance persons in a general -- in our generalized disposition of the application.

We normally limit the -- each statement to around five minutes. We won't stop you in the middle of a sentence, but oral statements are normally about five minutes. And I think the persons who are going to make statements should come to the --

I might say you can write longer ones and those statements will be put into the record as well.

Persons who are making oral statements should

1 come to the table where the microphone is now present.

2 We propose to call each person in the order on
3 which they have listed their names on the sign up sheet.
4 Sign up sheet is another sheet is on the room divider.
5 And if further persons wish to make statements, they may
6 do so. They may add their names to the list.

7 We ask for your address, mainly so we can send
8 you copies of the initial decision which we finely issue.

9 First person on the list is a Mr. Vonhoy, if I
10 read it correctly.

11 MR. VONHOY: Gentlemen, my name is J. L.
12 Vanhoy, and I am the executive secretary of the Houston
13 Gulf Coast Building and Construction Trades Council. I
14 have held this position for the past seven years, and
15 prior to this position, I was a union representative for
16 fifteen years located in Freeport, Texas.

17 JUDGE BECHHOEFER: Could you put your address
18 in the record.

19 MR. VANHOY: Yes. 2704 Southerland, Houston,
20 Texas, 77023.

21 During this time, I have been closely
22 associated with many of the major power plants that have
23 been constructed in the Gulf Coast area. I am very proud
24 and pleased to report today that in my opinion, the
25 safety procedures initiated by Houston Lighting & Power

1 and power company currently in effect at the South Texas
2 nuclear project plant are second to none that I have
3 never had the opportunity to be a part of.

4 We started this job some few years ago under
5 some very adverse conditions. Houston Lighting & Power,
6 in their wisdom, selected the two top contractors in
7 power plant construction in the world today. That being
8 the Bechtel Corporation and Ebasco Services to complete
9 this faltering project.

10 Now we are pleased to be a part of this team
11 that has put together this project on schedule and within
12 budget. The thousands of people represented by my
13 counsel who are natives of this area, many who are
14 employed on this project, feel that this facility will
15 not only be a source of employment, but also an excellent
16 neighbor and an asset to this community.

17 In conclusion, I would urge you, the members of
18 this committee, to act favorably on Houston Lighting &
19 Power's behalf so that we will all be able to complete
20 this project in a timely manner, thereby providing much
21 needed power to the citizens of this great state of
22 Texas.

23 I thank you for granting me this time to speak
24 out on this issue, that is so vitally and urgently
25 important to my membership, and also the citizens of this

1 Gulf Coast. Thank you.

2 JUDGE BECHHOEFER: The next name is -- it's
3 hard for me to make out the first name, it's either a Ms.
4 or a Mr. Simon.

5 MR. MAYFIELD: Mr. Chairman, my name is Ely
6 Mayfield, Moe E. Simon, whose name appears on that list,
7 has become ill and left this hearing room.

8 JUDGE BECHHOEFER: Would you like to come up to
9 the microphone?

10 MR. MAYFIELD: Thank you.

11 JUDGE BECHHOEFER: Could you provide your name
12 and address for the record.

13 THE WITNESS: Yes, sir. My name is, Mr.
14 Chairman, is Elie Mayfield, I live at 212 Magnuson,
15 Palacios, Matagorda County, Texas.

16 I rose after you announced the name of Mr.
17 Simon to inform you, Mr. Chairman, and members of the
18 commission, that Mr. Simon is cochairman of a citizens
19 group, a loosely organized citizens group in Matagorda
20 County, Texas, that has sometimes locally been known as
21 "The Pro-Nuke Group." Really we're officially known as
22 Matagorda County citizens for the promotion of the South
23 Texas Project.

24 If I may, I would like to say for the record on
25 behalf of Mr. Simon and myself, that we know of very

1 little evidence in Matagorda County, Texas, of people who
2 are really concerned about the safety of the future
3 operation of the South Texas nuclear project.

4 In essence, our group believes that you, and
5 your commission, after your deliberations, after you have
6 heard all of the testimony and evidence that you will
7 hear about the construction of this project, will grant
8 to the applicant, the license which they so much want at
9 this time or which will be granted at a later time.

10 Let me say this on behalf of myself, as an
11 individual, citizen and resident of Matagorda County,
12 Texas. I have resided with my family as the crow flies,
13 within ten miles of the present site of the South Texas
14 Nuclear Project. And I am not one jot or one tittle
15 concerned about the safety of the operation and/or the
16 construction of the South Texas Nuclear Project. I
17 certainly am not an expert insofar as nuclear physics is
18 concerned, nor as to the effects of radiation.

19 But it was my duty and privilege many years ago
20 to learn a little something about atomic energy and the
21 effects of radiation.

22 During World War II, I served as a, what we
23 called in those days, a Chemical Officer. And I served
24 for 33 months overseas. And then I came back and I
25 remained in the reserve of the United States Army, and at

1 one time was designated a rad safe officer.

2 And it was my privilege and opportunity to
3 serve and to observe the effects of nuclear radiation
4 tests that occurred on a tiny atoll in the pacific,
5 Anawetauch.

6 And we, these officers, there were about 33 of
7 us that were stationed at Treasure Island near the
8 Lawrance Rivermore Project of the University of
9 California, and we observed these battleships that were
10 subjected to these a tax, we learned a little something
11 about doseometers, film badges and geiger counters, and
12 that sort of thing.

13 And I think I can say that I have suffered, if
14 you want to use that term, "suffered" or I experienced
15 more roentgens of radiation than any person in this room.
16 And all of that exposure was controlled, and I have
17 observed, I have not suffered any ill affects physically.
18 You know, that's just a little aside to point out to you,
19 as members of this ASLB, that really, some of us who have
20 maybe a little knowledge -- which could be dangerous, but
21 I don't think it is -- we're not all that concerned about
22 the operation of a nuclear power plant.

23 Even with TMI, and those other incidents that
24 we have observed in the United States. What I'm saying
25 is the people of Matagorda County, that I know of, the

1 majority of the people, are not the least bit worried
2 that Houston Lighting & Power Company is not competent
3 and does not have the character to operate this plant
4 once you give them the license. And we think that they
5 are entitled to be licensed to operate this plant.

6 I must say one more thing. I attended your
7 hearings during the last few days, sometimes, and I
8 listened to, I think, very atentively, to some of the
9 remarks made by some or one of the entervenors,

10 And I am a little bit surprised and amazed that
11 you, as Commission Members, give so much time to people
12 who are dedicated at being entervenors in this project,
13 when I personally think that people such as Mr. Sinkin,
14 the one entervenor who is hrere has one purpose in mind,
15 only, and that's a self efficient purpose. He is a
16 professional entervenor, nor, from what I can read and
17 know about him, and I think that his one and sole purpose
18 as a lawyer or an entervenor in these process, is to at
19 some time or another, be a member of the group who are
20 really what we call in the legal profession, atomic
21 litigators.

22 I do not mean to demean your atentiveness to
23 listening to Mr. Sinkin, as an entervenor; nor, I do not
24 mean to say that you should not have listened as to him.
25 I feel like that your regulations and your policy

1 requires that you do give him enough credible attention.

2 However, I do not think for one instance, nor
3 do we believe in Matagorda County, Texas, that he speaks
4 for or represents any of the plausible good opinions so
5 far as your granting this operating license to the
6 applicant. Thank you, Mr. Chairman.

7 JUDGE BECHHOEFER: Mr. Buckhorn.

8 MR. BUCKHORN: Mr. Mayfield, that radiation
9 changed the colored of your hair.

10 JUDGE SHON: Makes it fall out, too.

11 JUDGE BECHHOEFER: Could you give the reporter
12 your name and address.

13 MR. BUCKHORN: My name is Ken Buckhorn, I live
14 in the Life Oaks between STP and Brzazoria, Route 1, Box
15 1684, Brazoria, Texas, 77422.

16 Recent history of 28 years in the major
17 petrochemical industry, before recently retiring, and I
18 have been a member of CEU, that's Citizens for Equitable
19 Utilities, which was an intervenor nor in this proceeding
20 back in the years BG, that's before Goldberg.

21 JUDGE BECHHOEFER: I think we became acquainted
22 with your wife.

23 MR. BUCKHORN: Well, by comparison with my
24 experience in highly competitive free enterprise
25 industry, the performances really of all parties to STP

1 prior to '79 was sort of incredible, to say the least,
2 compared to free enterprise system. That's significantly
3 changed.

4 Now, I make a lot of comments and kind of
5 blunt. I hope you'll take them as constructive. Because
6 when I mention all parties prior to '79, I'm talking
7 about the NRC, HL&P, the contractor and all of us. And a
8 few of comments there, they don't pertain to today,
9 really, but in general.

10 I would hope that in the future, that the NRC
11 would come in early and try to involve some of the local
12 expertise in your impact statements, more than you did in
13 the past. And there's a lot of good local expertise
14 along the Gulf Coast. You get companies that have 7 or
15 8,000 people, largely technical plus their contractors
16 and construction; we're there; we like to be involved and
17 like to be informed.

18 A comment on site. I would suggest to the NRC
19 insistance on a complete evaluation of the soil
20 condition, including tests, borings, coaring and
21 analyzing the soil for its suitibility for foundations.

22 Without going into it, your aware that this
23 costs a lot of time and money, and there's an internal
24 Brown & Root report which explained this thing.

25 Then another thing where you're not directly

1 involved, but maybe you should be.

2 On a project that is this critical and this
3 complex, there should be an insistance that the detailed
4 engineering should be 80 percent complete before the
5 contractor goes through the gate to get in the field.

6 The saddest sound in a nuclear power plant, I
7 believe, is the sound of a jack hammer trying to knock
8 out concrete with inch and-a-half and two inch rebar
9 steel in it. And that's a lot of cost and time, enough
10 said on that. You are familiar with the project.

11 Another thing that you did, which was most
12 informative, back in November of '83, your assistant
13 project manager was here for a case load forecast for the
14 NRC. At that time, the status of this project was
15 carefully reviewed, the new start had been made and
16 projections had been made, and an excellent presentation
17 on the part of HL&P and the contractors. And it would be
18 very enlightning if that was done annually. Of course, I
19 hope that the management of HL&P has that out front and
20 watches it daily to see where they are on the curve on
21 the projections.

22 But that was a very good report, I think it
23 helped everybody including the project management.

24 On QA/QC coverage, I believe that you have
25 adequate personnel so that they're not holding up

1 progress of any job at this time. But in case that's not
2 true, this is a very important point.

3 Also, here's one for you for the future, I hope
4 that the NRC will state all of the criteria for their
5 next nuclear power plant and publish it and get the
6 president of the United States to sign it that they're
7 not going to make any changes for that particular plant
8 once they get started.

9 Another thing, this is not primarily your
10 responsibility but the endorsement of rigorous
11 qualification testing of personnel is requirements for
12 employment, so that you know in the construction of a
13 nuclear power plant, those people present are capable of
14 doing the job right the first time. That's the only way,
15 because when -- if you're going to argue for nuclear
16 power, you have to assume that the plant has been built
17 correctly.

18 And a concern of CEU, though I'm speaking for
19 myself today, I'm not authorized for the organization.
20 The concern is, that when you build a nuclear power
21 plant, that you're sure that it's safe and sound and once
22 it comes on stream, it's going to be a reliable source of
23 electric power at a price that the people can afford to
24 pay. And that's a big fact -- issue, and it hasn't been
25 easy to achieve.

1 And from my comments here, involving also the
2 construction management. The site evaluation and 80
3 percent engineering completion, I think, should carry
4 through here. And in the construction of the plant,
5 fellows, the first priority in your purchasing and
6 construction ought to be the installation of elevators
7 for personnel and materials. Because without them, you
8 cannot get efficient construction, in my opinion, they
9 just spent -- you get lost going from here to there for
10 something. --

11 Also the assurance of very rigorous testing
12 program at the site, for the qualification of personnel.
13 And I'd like to comment here at the restart, I guess, in
14 '82, I had an opportunity to visit in the welding,
15 testing program. And they had an excellent tight program
16 going for the qualification of welders for this project.
17 I sure -- I hope it is still in full force.

18 Again, the ability to do the job right the
19 first time; and not have a 55 percent rejection rate,
20 which essentially triples your cost and time of
21 installation and that comes from deposition by the man
22 who was running the show from '79 to '80 out here.

23 Now, one thing that's troubled me a great deal,
24 and again I'm getting away from NRC business a little
25 far. But for qualified people in the field, I think

1 there ought to be a daily log of performance.

2 A good craftsman out there doing a good job, if
3 he's a welder let's say, for example, ought to make notes
4 of what he did through that day so at the end of the day,
5 if all he's done is weld on a three inch pipe, it's going
6 to be hard to explain. But if he made the first pass and
7 then had to go look for an inspector for 46 minutes, he
8 ought to record it. And then if he made some more two
9 inch welds, he ought to record this, or if he had to sit
10 and wait for his materials, this needs to be recorded.

11 What I'm saying is, I think you have the
12 qualification of people, but what about the performance.
13 And if things are holding up a good man, it would be
14 helpful, not just to this man, but to his front line
15 supervisors and his supervision, to be aware of this and
16 help to get the kinks out if they exist.

17 Well I'm doing a lot of talking. But over a
18 period of time, I would like to comment, since my wife
19 was -- is the executive director of CEU, Citizens for
20 Equitable Utilities, of course I've had access to a good
21 bit of real data which comes from discovery in the files
22 of the plant, as built drawings, if you will. And so you
23 try hard to screen out emotions and reports for valid
24 data and information, try to stay objective.

25 A comment. I made several site visits. I

1 mentioned the 1983 case load visit which I thought was
2 very good. I had a chance to tour the plant when
3 Chairman Palodena was down, about the end of '83. And in
4 '84 there was an independent audit conducted by HL&P,
5 where they brought in some real industry expertise and I
6 had the privilege of sitting in on their kick off meeting
7 and their wrap up meeting, I thought that was very
8 constructive.

9 Then in 1985, I think it was in April, NPOL was
10 down for their kick off meeting, and then their wrap up
11 in the following month. And as you are aware, that was a --
12 it was a very candid and constructive exit meeting that
13 was held. That was a very good session in my opinion.
14 Because there was a tremendous amount of expertise from
15 the industry there, and I make no claims of understanding
16 all the that they were doing.

17 And in -- on May 2nd, '85, was the last visit I
18 made, in which Jim Williams of HL&P and Peg Buckhorn of
19 CEU and myself made a tour of the plant.

20 Now, I want to amplify a little bit on a couple
21 of comments. I feel that because of the history here,
22 this STP plant is in the spotlight of nuclear plants in
23 this nation.

24 You've got the nations best experience in
25 design and construction available, provided it is brought

1 to bear on this project. And I assume that it is.

2 Also, you have really, almost a pick of crafts
3 people with the slower construction elsewhere, the
4 ability to find some very well qualified people to work
5 on the project. And in that light, I feel like the
6 completion of this project on schedule, on time and on
7 dollars, as it's been projected becomes very important to
8 either the revival of the nuclear power industry or maybe
9 the end of it, as we've known it in the U.S.A.

10 I know it's at a mighty low ebb right now to
11 try to get somebody to invest in a new one. But what I'm
12 saying is: This project is a spotlight and performance
13 from here and it's pretty well going to spell where we're
14 going in nuclear power in the United States. You're
15 going to make it or you're going to break it.

16 What incentive is it out here at this project,
17 to really perform. That's a tough one, because you have
18 no free enterprise competition. I think somewhere along
19 the way here, the public utility commission is going to
20 have to put a ceiling on the capital on the equity that
21 is allowable for return on equity. Now that's a real
22 broad statement.

23 But if there was a sealing of something like
24 \$2,000 per kilowatt, that PUC would consider for return
25 on equity, I believe people would really buckle down and

1 go after it and I think you can do it. And that's about
2 where you end up with your projection.

3 JUDGE BECHHOEFER: We can't do anything about
4 that.

5 MR. BUCKHORN: Well, I know you can't. I've
6 taken this opportunity for some people in the audience,
7 because I'm telling you what I believe and what I think I
8 see.

9 Let me make this one comment. On the last
10 visit out to the plant, you have a lot of people out
11 there, I know you're projections, I know that there's a
12 whale of a lot -- you are saying 80 percent complete on
13 No. 1. I hope you're right. But you go through that
14 project, there's an awful lot of big open space in
15 containment and elsewhere, you see major pipe hangers
16 that are partly welded. You see a lot of hangers in
17 place where you know a million of feet of cable still
18 have to go in the cable trays. And that's going to be a
19 race, especially when you see a crew out there that's
20 going inch by inch on that heavy cable, and you're
21 talking about million of feet. It's a challenge; I sure
22 hope you're right. You've got to be.

23 And one other comment I want to make here, is
24 to the people who are the crafts and your leadership out
25 at the plant; the one thing that troubled me frankly, and

1 I hope this is just a bad day. There were a lot of
2 people out there and a lot of motion, but very, very few
3 of those people were doing hands on constructive job at
4 the time. For every man with a welding torch in his
5 hand, there must have been fifteen of them going and
6 coming someplace. I don't know where to. Up and down
7 those long ladders.

8 Well, enough said. And then a question to all
9 of you, the industry, the NRC; if we're going any further
10 in nuclear power in the United States, how do we get the
11 qualified persons in the NRC, the utilities, the
12 contractors, to sit down together throw in a few
13 legislators to educate them, and decide what we will have
14 to do to define the potential and the approach for any
15 future nuclear plants, in coordination with other energy
16 sources, so through in the Department of Energy, also.

17 But we're lost in the woods right now. And if
18 we can get a good example here, then somebody with
19 authority needs to pull these groups together and decide
20 what it is that we haven't been doing that we need to do,
21 because down the road, our surge of petro chemicals,
22 petroleums, natural gas and so forth is not going to last
23 forever, and let's not be so short sighted that we throw
24 this out the window before we evaluate the long range
25 picture.

1 Thank you for listening, I could talk all
2 afternoon if you'd let me, but I know you won't.

3 JUDGE BECHHOEFER: Mr. Johnson.

4 MR. JOHNSON: My name is A.H. Johnson, Post
5 Office Box 92, Marcum, Texas, 77456.

6 And I, like Mr. Elie Mayfield, can claim no
7 area of expertise other than some service in the Navy
8 where I acquired a little bit of information about
9 kamikaze attacks on ships of the line, in World War II.

10 I'm a retired farmer and rancher. My home is
11 on land that I was born on 65 years ago. This land is
12 ten miles north down wind from the South Texas Project.
13 I have four children and seven grand children. As a
14 result, I have an abiding interest in the safety of this
15 project.

16 I attended the environmental statement phase of
17 the licensing process that was held at the Oasis Motel in
18 the mid '70s. Much consideration was given to aligators,
19 snow geese, slaves graves in cemetarys, and to the
20 ecology, but there wasn't too much talk about
21 grandbabies.

22 And this is evident from examining table 7.1 on
23 Page 7-1 of the environmental statement of 1975. In
24 which table a Class 9 postulated accident is not
25 considered by the applicant.

1 On May the 2nd, in the adjacent courtroom at a
2 meeting, I raised the following question. Since Three
3 Mile Island was attributed to a malfunctioning valve,
4 could a determined kamikaze attack on the STP Plant cause
5 another valve malfunction.

6 When I said kamikaze attack, I mean an
7 explosive laden aircraft with a suicidal pilot at the
8 controls, a nut with a cause or someone who thought he
9 had a cause.

10 The experts at this meeting on May the 2nd did
11 not answer the question to my satisfaction. They made
12 reference to many solid feet of concrete, this type of
13 valve had been changed, made also references to acts of
14 war that they weren't responsible for acts of war, and I
15 wasn't fully satisfied with the answer that I received.

16 I received a letter from the Nuclear Regulatory
17 Commission over the signature of Mr. William J. Derks,
18 executive direct for for operations in the NRC, in which
19 he states,
20 and I quote from this letter: " The NRC does not require
21 protection against a maximum credible threat scenario,
22 such as crashing an explosive laden aircraft into a
23 site.

24 Protection against such levels has not been
25 required since there has been no indication that such

1 threats actually exist, and since the probability of the
2 release of radio active material of concern is low,
3 unquote."

4 I say that such a threat actually exists and
5 have occurred. I have here a newspaper clip from the
6 Victoria Advocate of December the 20th, 1982, which goes
7 into the detail of a nuclear plant being rocked by a
8 terrorist bombing in Cape Town, South Africa.

9 I also have a Chronical story dated June the
10 25th, headlined: "U.S. Studies The Possibility Of
11 Nuclear Terrorism." This article goes on to tell of a
12 state department deputy director, a Mr. Dave Mayberry, of
13 its antiterrorism office who states, "We don't take it
14 lightly, and we feel absolutely compelled to provide a
15 sound contingency planning base for the State
16 Department."

17 This article continues with a quote from
18 retired admiral Thomas Davies, he's a former chief of
19 development of the Navy, and I quote him. "There are
20 nearly 50,000 nuclear weapons in the world spread
21 throughout hundreds of storage, storage sites, protected
22 in theory by high quality systems and personnel."

23 Davies said, "How well does military security
24 protect against terrorism. Davis note recent reports
25 that it might be possible to build a back pack nuclear

1 weapon with the power of 250 tons of TNT, deliverible by
2 a two-man commando team.

3 Senator Loyd Benson recently introduced
4 legitimate that would beef up the funding of FBI
5 personnel to combat terrorism in the United States.

6 There was also an article recently printed in
7 the Daily Tribune, in which it stated that, "The
8 commissioners court of Matagorda County had recently
9 granted the applicants permission to install a warning
10 system of sirenes surrounding the STP. These sirenes
11 were to be installed at the road right-of-ways.

12 My question is this: Does the Applicant plan
13 to blow the sirenes before the kamikaze plane hits or
14 after the kamikaze plane hits?

15 On top of the recent surge of terrorism in the
16 world, the likes of newspaper articles I have just
17 mentioned, I have to think about the \$100,000 fines back
18 in 1980 due to deficiency in STP's quality control
19 program. This tends to give a layman a sense of fear
20 concerning the project.

21 If the applicant and the NRC both refuse to
22 recognize the types of threat that I have just mentioned,
23 and considered remedies, this is the cause of further
24 concern for me and mine.

25 I can understand why detailed information on

1 defensive structures, security equipment and security
2 plans should be withheld from the public in order to
3 prevent, compromise of their effectiveness. But I cannot
4 understand why the NRC and the applicant does not admit
5 this type of threat exists and plan accordingly instead
6 of asserting there has been no indication that such a
7 threat actually exists.

8 Paragraph 3 on Page 7-1 of the 1975
9 Environmental Report states" "The commission issued
10 guidance to the applicant on September the 1st, 1971,
11 requiring the consideration of a spectrum of accidents
12 with assumptions as realistic as the state of knowledge
13 permits.

14 The state of knowledge at that time did not
15 include the activities of the terrorists that we are
16 witnessing today.

17 Thank you for allowing me this much time. I
18 hope my remarks will be made a part of the record and I
19 hope that they will be considered in this process.

20 JUDGE BECHHOEFER: I might comment on Mr.
21 Johnsons' statement that the commission has newer
22 criteria than the criteria to which he referred. I do
23 not believe that they covered the type of terrorist
24 attack that he's referring to, but they do cover a
25 different spectrum of accidents, to be dealt within

1 environmental statements.

2 JUDGE SHON: I don't think your microphone is
3 working.

4 JUDGE BECHHOEFER: I was saying the commission
5 has issued criteria which supersede the criteria that you
6 referred to. I do not believe they refer to terrorist
7 attacks yet they do refer to a different spectrum of
8 accidents that then was referred to in the earlier -- the
9 earlier criteria which were really draft criteria.

10 The commission, I think, issued a policy
11 statement about 1980, sometime.

12 MR. JOHNSON: This letter I have is dated 1983
13 from the Nuclear Regulatory Commission.

14 JUDGE SHON: Mr. Johnson what the chairman
15 meant was that the spectrum of accidents has changed so
16 that the statement read from the environmental impact
17 statement were no longer true.

18 It's true, of course, as Mr. Dircks told you,
19 that this size threat from an outsider is not considered.
20 You are right there.

21 JUDGE BECHHOEFER: Dr. Nocosad. I hope I'm
22 pronouncing it adequately.

23 MR. NOCOSAD: Good afternoon, gentlemen. I'm
24 Dr. Nocosad, of 214 Mayfair Circle in Wharton, Texas,
25 77488. I serve as the mayor pro tem of the City of

1 Wharton. And it gives me great pleasure to take this
2 opportunity to express my support and confidence in the
3 South Texas nuclear project.

4 From the very beginning of our State, Texans
5 have always met head on any difficulties and in so doing,
6 have eventually not only succeeded, but excelled in their
7 actions. I believe that this is what we are witnessing
8 at the South Texas Project.

9 The past periods of difficulty serve to
10 strengthen all of us. To maintain pace with rapid growth
11 that our state is experiencing, the electric utilities
12 have long planned for alternatives to natural gas
13 generation.

14 We must continue to move forward, the vitality
15 of our land can only be assured by plenty of energy.

16 In my city alone, we presently have on the
17 commitment list, \$40 million of new development. This is
18 the equivalent of one fifth value of the entire city.
19 Houston Lighting & Power is playing a major role in this
20 development. Many of are unaware or have forgotten that
21 our electric utilities began educating and encouraging
22 youth over 20 years ago ago, through the Texas Atomic
23 Energy Research Foundation. I was one that benefited
24 from these intensive seminars.

25 Needless to say, we have learned much since

1 that time. But in my mind, the South Texas project has
2 demonstrated many things, that as a nation, we should
3 consider primarily we should standardize all our plant
4 designs in the future. And we should not delay any long
5 near finding answers to the waste disposal question.

6 In closing, I want to say that we need South
7 Texas nuclear project, and that I'm extremely proud of
8 the manner in which we have overcome deficiencies, that
9 were discovered early on.

10 I have the confidence that the project partners
11 will be commended when this plant is finished.
12 Gentlemen, thank you.

13 JUDGE BECHHOEFER: State Senator Sharp.

14 MR. SHARP: Thank you, Mr. Chairman, and
15 members. My name is John Sharp, I live at 707 West Power
16 Avenue in Victoria, Texas, and I'm the State Senator for
17 state senate district No. 18 which includes Bay City and
18 Matagorda County and stretches from Sugarland and Freeport
19 to very near Corpus to about 52 and-a-half miles north of
20 Austin. I represent about 525,000 people.

21 My friend Representative Uher, I asked him
22 awhile ago what part he would like me to talk about and
23 he suggested that I talk about a minute and-a-half so
24 I'll keep this remarks in mind.

25 Having been on the receiving end of public

1 testimony, I know that inadvertently or not I have a lot
2 of sympathy with those people who have brevity so maybe
3 you are feeling the same way.

4 What -- I think I can come before you and speak
5 with a great deal of confidence that the overwhelming
6 majority of my constituents, whether they live in Bay
7 City or whether they live in Anderson Mill or Rockport,
8 believe that this project ought to proceed as fast as
9 possible, with due timeliness and should not be
10 cancelled, any part of it, whatsoever.

11 I have never received a phone call, I have
12 never received a letter from one of my constituents as a
13 matter of fact, who expressed fear that this project is
14 not going to be safe or who has called me and asked me to
15 work for the cancellation of STP one or two. Have never
16 heard that and as a matter of fact, to go even further, I
17 have never heard any of my constituents mention anything
18 in that vein until this hearing today when I've heard two
19 of them and I certainly respect their opinions but I
20 think although I am certainly not an expert in
21 electricity or nuclear power, I have a reasonable idea
22 that if you turn on a light switch, it's going to come
23 on.

24 I do have some idea of what my constituents are
25 thinking and the only comment up until today that I have

1 heard about radiation was from a farmer who lived in
2 Polacios about six months ago who expressed to me a great
3 deal of confidence that he will receive in his lifetime a
4 lot more radiation from his wrist watch than he will
5 receive great that plant out there. I think that South
6 Texas project is making excellent progress toward
7 completion, the NRC, et cetera, and other outside parties
8 have given it high marks and I'm here today to urge you
9 to consider three things, first to urge the Atomic Safety
10 and Licensing Board to act prudently and efficiently to
11 ensure that their proceedings support the completion
12 schedule of the South Texas Project; secondly, to urge
13 the board to hear only factual information and not
14 unfounded allegations and third, I would ask that you not
15 let any single intervenor who's only goal might be the
16 cancellation of this project increase it's cost further
17 by creating unnecessary delays.

18 And I might also add that I have heard state
19 officials, public officials, in and around Austin or San
20 Antonio or all the high tech area, talking about the need
21 for jobs and the things that we need to have with regard
22 to the high tech MCC Corporations, et cetera, moving to
23 Texas. And I think that's wonderful, but I would suggest
24 to you that if we have the biggest high tech boom any
25 state ever had in the next five years they will not

1 create the eleven thousand jobs we've got right here
2 because of this project. And I would urge you to do what
3 you can to assure its completion. Thank you.

4 JUDGE BECHHOEFER: Mr. Porter.

5 MR. PORTER: Mr. Chairman, ray porter,
6 Teamsters Local 11, Houston, Texas. I've worked out
7 there at that project since the 24th of March, 1982,
8 which is when the Ebasco first took it over. I would
9 like to comment it's the safest job I've ever worked on.
10 I've worked at several petrochemical plants up the
11 channel up there, and bar none this is the safest.

12 And of course, kamikaze pilots, I guarantee
13 you, we got more kamikaze drivers than we do pilots down
14 here. And some of the other stuff, it kind of reminds me
15 of someone going to Churchill Downs for the Kentucky
16 Derby on some of this stuff they're bringing up, going in
17 there with a four year old racing form.

18 We've got a competent professional bunch of
19 workmen out there, we're doing that job right, we're
20 going to continue doing it right and we're going to build
21 it and we're going to get light out of that plant. Thank
22 you.

23 JUDGE BECHHOEFER: Mr. Reese.

24 MR. REESE: Mr. Chairman, members of the Board,
25 I am Bill Reese and I'm superintendent of the schools for

1 Palacios Independent School District, 1209 Twelfth
2 Street, Palacios Texas.

3 I'm here today to offer our statement,
4 representing our Board and myself, to convey our support
5 for licensing of the South Texas Project. I probably
6 need to say for the record, that I am only recently in my
7 assignment. I've been there six weeks. However, during
8 that time, I have had opportunity to be briefed on the
9 status of the project in terms of the construction, and I
10 have had opportunity to review the safety and security
11 provisions that HL&P and others have have planned for the
12 project.

13 And so I do -- and I have had occasion also to
14 speak with individual members of our Board and members of
15 our administration and folks in the community. So I feel
16 like while I'm not fully enlightened on the subject as of
17 this date, it has, because they are a major entity in our
18 school district, I have had occasion to educate myself
19 somewhat on the project.

20 Returning now to the statement. Our school
21 district, of course, has benefited both materially and we
22 believe qualitatively from the project. In our dealings
23 with the officials associated with the project, we found
24 that they held themselves in extremely professional
25 manner. We feel that in addition to that, the project

1 reflects a thorough, as of this date, a thorough
2 consideration for the safety, security of our community.

3 Our school district and our community has
4 benefited from their efforts to try to educate those
5 persons in the community who wish to be enlightened, and
6 further, I believe that we have benefited from the
7 security and safety provisions that they've implemented.

8 In short, we believe that the project has
9 brought many fine and constructive citizens to our
10 community, it's provided a foundation for future
11 industrial growth, promoting greater employment
12 opportunities and enhanced community services and we
13 believe ultimately a greater quality of life for
14 Palacios. Thank you,

15 JUDGE BECHHOEFER: Representative Uher.

16 MR. UHER: I'm state representative Bob Uher, I
17 live here in Bay City. My address is 700 Forth Street.
18 Matagorda County has been my home town, my residence all
19 my life. I was born 47 years ago, my legislative
20 district includes Matagorda County, includes Wharton
21 County and it includes the northwest portion of Brazoria
22 County.

23 I've been familiar with this project since it
24 started, and I've had the opportunity to visit the plant
25 site on numerous occasions, both prior to the current

1 contractor and engineering firms where they're, and under
2 the present builders and the engineering group there; and
3 have had the opportunity to examine the operation of the
4 plant, from the construction of it, firsthand. And I've
5 had the opportunity to get to know many of the people who
6 work on both the lowest level to the highest level with
7 the various firms that are involved and I can tell you
8 that I've been most impressed by the quality of the
9 people that we have on the site today.

10 I'm impressed by the quality of the
11 construction, if we were to build every plant or every
12 facility we tried to build whether it was public
13 buildings or whether it was highways as we were building
14 this nuclear plant down here, we would leave a legacy for
15 the people of the future that would go probably into the
16 year 3000.

17 It's well constructed. I'm pleased with the
18 progress that I'm seeing. I'm pleased with the type of
19 engineering.

20 You folks have had a tough job. You've gone
21 from a program that started probably altogether different
22 than it was when it was first started back in 1973, '74,
23 to the current level.

24 The people that we have here today, that are
25 involved in this plant and its construction, I believe

1 are doing an excellent job. I can only say that in
2 talking to my constituents and listening to people around
3 the county and the nearby counties, I've had nothing but
4 total support. There's been a few exceptions to that,
5 but have been very few people who have been opposed to
6 it. But I would say that probably 90 percent of my
7 district supports the construction of this project.

8 I would ask that you expedite the hearing and
9 that you would expedite your decision so that in the near
10 future that we will have electricity coming from this
11 operation.

12 And let me say in closing that while we appear
13 to have today a bubble of oil and gas, natural gas, I
14 believe that we're going to see by the year 1990, a
15 shortage again as we experienced in the '70s and early
16 '80s, and that this nuclear plant is going to be very
17 vital.

18 This area is growing population-wise. Two
19 years ago I chaired the committee on reapportionment in
20 Texas, had the opportunity to see the demographics of our
21 state, how we're changing, how new people are coming to
22 Texas, the new type of techniques that are being used
23 today in constructing of many different things. And I
24 can tell you that Texas will continue to grow, and the
25 projection is that Texas will be the second largest state

1 next to California by the year 1990.

2 That means we're going to need more energy,
3 Texas moves on energy; this country moves on energy. And
4 we're going to need this nuclear plant. I solute what
5 you try to do. I've been in your shoes many, many times
6 over 17 years as a member of the legislature. And
7 sometimes these hearings get very long and I admire you.
8 Thank you.

9 JUDGE BECHHOEFER: Judge O'Connel.

10 JUDGE O'CONNEL: My name is Bert O'Connel, I'm
11 the county judge, Matagorda County, have served in that
12 capacity for the past seven years. I believe you have my
13 address, there, Mr. Chairman, I put it on your yellow
14 sheet. My address is the courthouse, Bay City Texas,
15 77414. This project has been, as you know, you heard Mr.
16 Uher and Mr. Sharp have said, have stated, it started in
17 the year approximately 1973, there's been several more
18 than one contractor on the job, we've seen the change
19 that occurred from one contractor to the next. We've had
20 full cooperation, speaking for the county, commissioner's
21 court from the operator -- or the manager of the project,
22 Houston Lighting & Power Company and their people;
23 Central Power & Light Company is the territory which the
24 plant's being build, it's their service area, and they've
25 been very cooperative.

1 And of course, we've seen -- we don't see too
2 much of San Antonio and the City of Austin; I don't think
3 I know any of their representatives. Any of those people
4 here today?

5 There's one that we don't tax; they're tax free
6 in this project. Houston and the Central Power & Light
7 are picking up the tax load on this project and that's
8 one thing that sticks in my craw as being unfair for the
9 whole project from the county level and the school
10 district level, Palacios School District. We assess no
11 taxes against the share that are owned by the City of San
12 Antonio and the City of Austin. I don't know whether
13 that that has any place here in this hearing or not.

14 But you might say that the other taxpayers in
15 this county, property owners, are subsidizing that part
16 of the plant, 44 percent of it that is not being taxed
17 that's owned by municipalities. We spent a little money
18 on that perceding, pursuing that in the courts, and I
19 guess the law of the land said that municipalities are
20 not taxed. But I don't believe that when those laws were
21 written, they meant for a remote owned facility of this
22 magnitude from the cities involved would go tax free and
23 be a burden on the rural county down in South Texas. So
24 be it.

25 We appreciate the cooperation we've had with

1 Houston Lighting & Power Company. They are the managers
2 of the project, they're the ones that set up the safety
3 rules and regulations that were required in this -- in
4 order to receive an operating license. The warning
5 system that Mr. Johnson speaks of and I respect what Mr.
6 Johnson said here, and he's an informed person in our
7 county, and he comes to our court and we talk to him, he
8 knows what's going on here and he has a concern. I
9 appreciate that.

10 Other folks, I'm sure this is not a hundred
11 percent popular project within the county. But like Mr.
12 Uher said, Mr. Sharp said, most of the people don't seem
13 to be concerned about the safety because they rely on the
14 Nuclear Regulatory Commission, through the efforts of
15 Houston Lighting & Power Company, the operators of -- or
16 the builders of this project, to build a safe and sound
17 electric generating facility which is fueled by nuclear
18 fuel out there.

19 The only thing they're trying to do is heat
20 water a little different than most other power plants
21 are. And of course that makes some complicated
22 procedures. But we do -- I'm here today to -- we have
23 the plant here, it's been here since '73, it's part of
24 our tax base.

25 As part of our citizenry here, the people that

1 operate the plant or going to operate it, the people that
2 are here working at the plant, which is somewhere around
3 10 000 craftsmen here at the plant, managers and
4 engineers and people who are building the plant, and I
5 hear that probably will be around a 1000 or 1,200 people
6 operating the plant after it's constructed. So we're
7 proud to have an industry of that size in this county.

8 The only thing we would be concerned with is
9 the safety and the operation of it, and we're relying on
10 the good judgment of you folks and Houston Lighting &
11 Power Company and we feel comfortable that that end will
12 be met with the safe operating nuclear plant to provide
13 nuclear energy in massive amounts for a price that the
14 folks along the Gulf Coast can afford to keep the good
15 industry going that we have here along the Gulf Coast.

16 I just wanted to get said one thing, that it's
17 stuck in my craw a little bit about the way the tax setup
18 is on this. I wanted you all to know that.

19 JUDGE BECHHOEFER: I don't think we could do
20 much about taxes, but our -- I don't think we could do
21 much about the taxes one way or the other.

22 JUDGE O'CONNELL: I was the county attorney up
23 here for 30 yers before my successor, and he says to to
24 me, "Boy, if we win the suit, we are going to change the
25 law of the land; you know that don't you?" I don't think

1 the framers of the Constitution or the persons who
2 enacted legislation since meant for that situation to
3 occur in this magnitude.

4 JUDGE BECHHOEFER: In any event, I know our
5 licensing board would like to thank Judge O'Connell for
6 the use of this facility which we've found very
7 satisfactory. So we will thank him for that as well.

8 Mr. Reis, are there further names on the last
9 behind you?

10 MR. REIS: There's one name, S. D. Lapella

11 A VOICE: He had to leave.

12 MR. BUCKHORN: May I make one additional brief
13 comment to my comments?

14 JUDGE BECHHOEFER: I guess so.

15 Are there other people here who want to make
16 comments as well, because we will invite you to do so.

17 You may return for a minute.

18 MR. BUCKHORN: I'm Ken Buckhorn, and from what
19 I had to say you can understand my for eagerness to see
20 this project keep on keeping on and doing good. And I
21 don't want to by doing that, I think maybe I overlooked a
22 little bit some of the real good improved things that we
23 do see. I just wanted to make the comment, compared to
24 just a few years back, it's night and day. The personnel
25 at the plant, performance, the quality, and attitudes,

1 you name it. All I wanted to be sure is you realize
2 that. It's very good.

3 And I'm just commenting, though, that it's
4 important to this plant and to future plants that they
5 keep on keeping on and come out on projection so we have
6 a future so there will be some more jobs after these jobs
7 are done, so to speak.

8 JUDGE BECHHOEFER: Thank you.

9 MR. BUCKHORN: I have to say it's looking good,
10 except that I have reserved optimism until it's on
11 stream. But yes, sir, it's a completely different story
12 from what it was.

13 JUDGE BECHHOEFER: Is there anyone else who
14 would like to make a statement? Come on up here. Give
15 your name and address for record.

16 KEN BARNETT: My name is Ken Barnett, and my
17 address is 1413 Linwood, Wharton, Texas, 77488. I am the
18 president of the Wharton chamber of commerce and
19 agriculture. I serve in other capacities in the City of
20 Wharton, such as a member of the city planning commission
21 and on other various boards and public and private
22 sectors of our community. I am self employed as a real
23 estate broker. I have been a resident of Wharton County
24 practically all of my life. I have roots that stem from
25 Matagorda County; my parents, my father's side of the

1 family was raised in Palacios which is a few short from
2 this project. So I have been here and I've been around
3 the project ever since its conception.

4 With the idea in mind that this area is growing
5 and the business that I'm in, I see the growth that takes
6 place, I'm here to speak in favor of the project and to
7 encourage you to proceed forward in the licensing so this
8 project can open up. The things that have happened as
9 far as the contracting and the things that have happened
10 in regard to the problems that have occurred, I feel
11 confident from the information that I have been given and
12 the reviews of the site, that the problems have been
13 solved and are being worked out and the completion of the
14 project is taking place in an orderly professional
15 manner. So from that standpoint, I would like to urge
16 this commission to proceed forward as fast as possible
17 for the licensing of this project. And that's all I
18 would have to say to you. Thank you very much.

19 JUDGE BECHHOEFER: Is there anyone else who
20 wishes to make a statement?

21 A VOICE: We just received a call. We think
22 Congressman McSweeney is on his way and I was asked to
23 advise you of this. We think he's in town but we don't
24 know.

25 JUDGE BECHHOEFER: Why don't we take about a

1 fifteen minute break and then we'll take anybody else
2 who's here, including the Congressman if he's here.

3 (Brief recess.)

4 JUDGE BECHHOEFER: Back on the record. We
5 understand the Congressman is not going to appear. Are
6 there others, though, who would wish to make a statement,
7 others in the audience? If so come on up and make the
8 statement.

9 MR. LAMAR: Okay, where do I go.

10 JUDGE BECHHOEFER: Just around there and give
11 your name and address to the court reporter.

12 THE WITNESS: Okay. I'm Leonard Lamar, the
13 mayor of Palacios. You all have to excuse my appearance
14 because we're having a 4th of July celebration on the
15 13th in Palacios, our Lions Club. So I had to run over
16 here.

17 I did think it was important enough though to
18 come over here today to express Palacios' feelings
19 towards the South Texas Nuclear Project. We support it,
20 will continue to support it, and if there's anything that
21 Palacios can do to add any information to the project,
22 we'd be glad to do it. We really are behind the project.
23 We don't express it quite as much as Bay City does, but
24 we're there, and we'll always be behind the project.

25 That's really all I had to say, except these

1 people that are paid by the federal government to protest
2 the project, if they would get educated as much as I am
3 on nuclear power, I think they would cut off their hair,
4 shave their beards, take a bath and get on our side of
5 society and support the project. Thank you.

6 JUDGE BECHHOEFER: I don't know if the
7 government is paying anybody to protest it.

8 MR. LAMAR: Yes, sir, they are. It's a law,
9 state -- they're required to. Anybody that wants to --
10 am I wrong?

11 JUDGE SHON: Actually, sir, quite the opposite.
12 Congress has passed an appropriations act for the NRC
13 that specifically forbids the Nuclear Regulatory
14 Commission to fund intervenors in any way. I'm not the
15 lawyer, the lawyers are here. But that's --

16 JUDGE CECHHOEFER: That's what I was referring
17 to.

18 MR. LAMAR: Let me clear this up because when I
19 appeared before the Commission in Austin and everywhere
20 else, and I've always been told that we as pro, we as pro
21 nuclear advocates, cannot be paid or I wouldn't want to
22 be paid to support the project. But that there are by
23 law, people that are paid to, that they can go around our
24 country and protest this nuclear power. Am I wrong?

25 MR. REIS: Yes, you are wrong.

1 THE WITNESS: Okay. Then I have been advised
2 by people in the -- not with the nuclear power plant, but
3 I've been advised by people that I'm associated with that
4 there are laws that say that people are paid, there is
5 money available for anyone who wants to protest against
6 this type of establishment. And you all are saying this
7 is wrong?

8 MR. REIS: I am saying it's wrong.

9 THE WITNESS: Is there anyone in this room that
10 can give any light on this? I'd like to know. I have
11 been told ever since I'd been in city government, and as
12 I said, I've appeared before council here in Bay City, in
13 Austin, anyplace I was asked to appear to support this
14 project, that protestors are financed through the --
15 well, it's the Nuclear Regulatory Commission or however
16 they define it, but there is a federal law that any time,
17 that there is money available; there is not?

18 MR. REIS: No, if I could --

19 JUDGE BECHHOEFER: I see Mr. Sinkin. I was
20 going to say you ought to tell Mr. Sinkin about it.

21 THE WITNESS: We better get it cleared up now,
22 because this is what I've been told and if it's wrong, I
23 will not say the statement again.

24 MR. REIS: May I suggest you write to your
25 Congressman. Who's the Congressman from this district,

1 Mr. Sweeny?

2 MR. LAMAR: Yes.

3 MR. REIS: Write to Mr. Sweeny, ask him to
4 check it out with congressional legislative services, the
5 Library of Congress, to see whether there is any. To my
6 knowledge and I'm an attorney for the Nuclear Regulatory
7 Commission, there is no funding for intervenors, none
8 whatsoever.

9 MR. PIRFO: I might give an example, in this
10 particular case, Mr. Sinkin or me, this is a personal
11 anecdote, for a copy of the transcript and I refused to
12 give him a copy of that transcript on that basis that I'm
13 prohibited by law from offering him any aid and
14 assistance and I read giving him a copy of a transcript,
15 which he would otherwise have to go out and buy for a
16 relatively small amount of money, maybe \$50 or \$60,
17 whatever, I refused to give it to him on the basis of
18 that law. So for what it's worth, that's an example of
19 no funding.

20 MR. LAMAR: Well, two years ago, two years ago
21 over here in Bay City, that was brought up. And I, you
22 know, I've been misled or it's a false statement.

23 I'll talk to Congressman Sweeny also, I thought
24 he was supposed to be here today.

25 JUDGE SHON: There is a thing called the Equal

1 Access to Justice Act, wherein, after having sued the
2 government for various things or carried out various
3 activities against the government, one can apply for and
4 perhaps get money. I'll let Mr. Reis talk about that.

5 MR. PIRFO: I know a little bit about the Equal
6 Access of Justice Act and holding in mind the caveat that
7 a little bit of knowledge is dangerous, it would not
8 apply in these circumstances. The Equal Access to
9 Justice Act applies in a case where the government brings
10 an action against an individual and the individual
11 ultimately prevails, then they can get recompensed for
12 the attorney's fees they spent and other costs associated
13 with defending themselves against the government. But it
14 would apply in the context here of the Nuclear Regulatory
15 Commission.

16 JUDGE LAMB: One other possibility that occurs
17 to me, is that in some unusual circumstances, there may
18 be private support for people who do this. But if you're
19 talking about federal government support, it's not there.

20 MR. LAMAR: I'm talking about federal
21 government support, I'm not talking about private support
22 because I know we have private support.

23 MR. SINKIN: And I will tell you, sir, that I
24 am \$25,000 in debt because of this proceeding.

25 MR. LAMAR: Okay, well thank you. I apologize

1 to the Commission if this is a false statement that I
2 made, but this is what I had been told and that I've been
3 thinking, and I'll talke to Congressman Sweeny and I'll
4 get it straight.

5 JUDGE LAMB: Good to be cleared up.

6 MR. LAMAR: Because it's always been in my
7 feeling that, you know, because I see a lot of the same
8 people every place I go, and I'm glad to know that he's
9 financed it himself, I hate to see him out \$25,000, but I
10 feel as strongly for the project as you do against it.

11 MR. SINKIN: Fine.

12 MR. LAMAR: Thank you.

13 JUDGE BECHHOEFER: Thank you.

14 Anyone else wish to make a statement? Come on
15 up here. I didn't see your hand.

16 MR. BELL: Should I sit down or stand up? I'm
17 tired, I'll sit down.

18 Bill Bill, Mayor of Bay City. And I did leave
19 some festivities, too, like Mayor Lamar, but I'm here.
20 And I've been all over Matagorda County, and especially
21 throughout Bay City, and I have never run into opposition
22 to the nuclear project. And that's about all I can say.
23 We're pro nuclear plant, we like to see it continue, be
24 fueled and get underway.

25 We've been a long time. I was on the city

1 council back in 1971 through '75, and we were, in various
2 beginning -- when they started just even talking about
3 it, and today, when I hope I'll still be mayor when they
4 fuel it, and we look forward to great things coming from
5 STP project. Thank you.

6 JUDGE BECHHOEFER: Thank you.

7 Anyone else?

8 MR. IRVIN: My name is Isiah Irvin; I'm county
9 judge of Wharton county. And I'd like to say that I'm
10 pronuclear, and I agree with these gentlemen who are
11 saying that this is vital to the economy of our country.

12 My friends from the Light Company and Wharton
13 are, I often tell them that all these people should have
14 an opportunity to live in an area with a brown out or a
15 black out and see what happens when we have a power
16 failure. I've had that unique experience, and it's not
17 fun.

18 I've also had the opportunity to serve on the
19 Atomic Energy, DOD Safeguards Commission, looking into
20 the safeguards of nuclear, you know, weapons grade
21 material, and been in most commercial and military
22 nuclear installations in the United States. And my hair
23 is a little sparse, but other than that I don't think
24 there's been any ill effects from being around it. Thank
25 you very much.

1 JUDGE BECHHOEFER: Thank you. Any others who
2 wish to make a statements? Anyone else? Come on up.

3 Give the reporter your name and address.

4 MS. SHERAM: My name is Patsy Sheram, my
5 address is 1821 Sycamore. I noticed that that everyone
6 has spoke today has been a man, and I thought I'd give
7 you a woman's point of view.

8 I'm a mother and a grandmother of ten and we've
9 lived around this area since 1952. I have been on the
10 plant site, in the containment buildings and examined it.
11 I am also in the real estate business. I talk to an all
12 lot of people in Bay City. Everyone I have talked to has
13 supported the plant, been for it, and we are behind it a
14 hundred percent, we'd like to see it completed and on
15 line.

16 JUDGE BECHHOEFER: Thank you.

17 MS. SHERAM: Thank you.

18 JUDGE BECHHOEFER: Anyone further? If so, step
19 up.

20 MR. BUCKHORN: Mr. Chairman, may I ask you a
21 what if? This is hopefully way out. But what if a
22 Japanese management with Arab financing came to you for
23 an application to build a nuclear plant in the United
24 States.

25 JUDGE SHON: It cannot be done; it's illegal..

1 Plant's are supposed to be owned by U.S. citizens. That
2 one they've covered already.

3 JUDGE BECHHOEFER: Any further statements? Not
4 seeing any, I guess we'll call the session adjourned, and
5 we thank for all coming.

6 (Hearing adjourned at 3:40 p.m.)
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the UNITED STATES NUCLEAR REGULATORY 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: BAY CITY, TX

DATE: SATURDAY, JULY 13, 1985

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission.

(sigt) _____

(TYPED)

Official Reporter

Ace Federal Reporters, Inc.
Reporter's Affiliation