

UNITED STATES OF AMERICA

BEFORE THE  
NUCLEAR REGULATORY COMMISSION

In the Matter of:	)	
	)	
HOUSTON LIGHTING & POWER	)	Docket Nos. 50-498 OL
COMPANY, ET AL.	)	50-499 OL
	)	
South Texas Nuclear Project	)	
Units 1 and 2	)	

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

Wednesday,  
June 3, 1981

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

APPEARANCES:

Board Members:

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

ERNEST E. HILL, Nuclear Engineer  
Administrative Judge  
Atomic Safety & Licensing Board  
University of California  
Lawrence Livermore Laboratory, L-46  
Livermore, California 94550

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

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

## 1 APPEARANCES: (Continued)

2 DR. JAMES C. LAMB, III, Environmental Engineer  
3 Administrative Judge  
4 Atomic Safety & Licensing Board  
5 313 Woodhaven Road  
6 Chapel Hill, North Carolina 27514

7 For the NRC Staff:

8 EDWIN REIS, ESQ.  
9 JAY M. GUTIEPREZ, ESQ.  
10 Office of the Executive Legal Director  
11 U.S. Nuclear Regulatory Commission  
12 Washington, D.C. 20555

13 DONALD E. SELLS, Project Manager  
14 Office of Nuclear Reactor Regulations  
15 U.S. Nuclear Regulatory Commission  
16 Washington, D.C. 20555

17 JOE TAPIA  
18 WILLIAM HUBACEK  
19 Office of Inspection and Enforcement  
20 Region IV  
21 Arlington, Texas 76011

22 For the Applicant, Houston Lighting & Power Company:

23 JACK R. NEWMAN, ESQ.  
24 MAURICE AXELRAD, ESQ.  
25 ALVIN H. GUTTERMAN, ESQ.  
Lowenstein, Newman, Reis & Axelrad  
1025 Connecticut Avenue, N.W.  
Washington, D.C. 20036

FINIS COWAN, ESQ.  
THOMAS B. HUDSON, JR., ESQ.  
Baker & Botts  
3000 One Shell Plaza  
Houston, Texas 77002

22

23

24

25

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

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

APPEARANCES: (Continued)

For the Intervenor, Citizens for Equitable Utilities, Inc.:

WILLIAM S. JORDAN, III, ESQ.  
Harmon & Weiss  
1725 "I" Street, N.W., Suite 506  
Washington, D.C. 20006

GEOFFREY M. GAY, ESQ.  
3245 South University Drive  
Fort Worth, Texas 76109

MS. PEGGY BUCHORN  
Executive Director  
Citizens for Equitable Utilities, Inc.  
Route 1, Box 1684  
Brazoria, Texas 77422

For the Intervenor, Citizens Concerned About Nuclear Power:

ROBERT HAGER, ESQ.  
5106 Casa Oro  
San Antonio, Texas 78233

LANNY SINKIN  
838 East Magnolia Avenue  
San Antonio, Texas 78212

- - -

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2346

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

I N D E X

<u>WITNESSES:</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>	<u>BOARD EXAM.</u>
-------------------	---------------	--------------	-----------------	----------------	--------------------

DR. KNOX M. BROOM, JR.  
MR. RAYMOND J. VURPILLAT

By Mr. Axelrad	3637				
By Mr. Jordan		3659			
By Mr. Hager		3803			

EXHIBITS

<u>NUMBER:</u>	<u>IDENTIFIED</u>	<u>RECEIVED</u>
----------------	-------------------	-----------------

Applicants':

No. 32	3647	--
No. 32(a)	3651	3843

CCANP's:

No. 16	3824	--
--------	------	----

P R O C E E D I N G S

9:15 a.m.

JUDGE BECHHOEFER: Good morning, ladies and gentlemen.

Before we begin the Broom/Vurpillat panel, are there any preliminary matters that any party would like to raise?

(No response.)

JUDGE BECHHOEFER: With there not being any....

MR. AXELRAD: We would like to call at this time Dr. Knox M. Broom and Mr. Raymond J. Vurpillat, who have not previously been sworn.

Whereupon,

DR. KNOX M. BROOM, JR.

RAYMOND J. VURPILLAT

having been first duly sworn, were called as witnesses and were examined and testified as follows:

## DIRECT EXAMINATION

BY MR. AXELRAD:

Q Dr. Broom, will you please state your full name and position?

BY WITNESS BROOM:

A I am Knox McCloud Broom, Jr. I'm Senior Vice President of Brown & Root, Incorporated.

Q Mr. Vurpillat, will you please state your

1-2

1 full name and position?

2 BY WITNESS VURPILLAT:

3 A Yes. My name is Raymond J. Vurpillat, and  
4 I am Quality Assurance Manager for the Power Group of  
5 Brown & Root, Incorporated.

6 Q Gentlemen, do both of you have before you  
7 a copy of a document entitled, "Testimony on Behalf of  
8 Houston Lighting & Power Company, et al. of Dr. Knox M. Broom,  
9 Jr., Mr. Raymond J. Vurpillat on B&R Management and STP  
10 QA Program," which consists of 54 pages and two attachments?

11 BY WITNESS BROOM:

12 A Yes.

13 BY WITNESS VURPILLAT:

14 A Yes, I do.

15 Q Such document contains a series of questions  
16 and answers.

17 Dr. Broom, does your testimony in this proceeding  
18 consist of those answers which are preceded by your initials,  
19 "KMB"?

20 BY WITNESS BROOM:

21 A Yes, they do.

22 Q Do you have any corrections or additions to  
23 such answer.?

24 BY WITNESS BROOM:

25 A Yes, I do.

1 On page 14, on line 36, following "from our  
2 Procurement Group," please insert a comma and the following  
3 words, "the Vice President - Construction, comma."

4 If that's not clear, I'll read the entire  
5 sentence, if you'd like for me to.

6 JUDGE BECHHOEFER: I think it's clear, but  
7 why don't you read it anyway.

8 WITNESS BROOM: Okay. The sentence, then,  
9 should read, "The membership of this Board presently includes  
10 the Group Vice President of Power, all of the senior officers  
11 in the Power Group, a representative from our Procurement  
12 Group, the Vice President - Construction, and the Power  
13 Group QA Manager."

14 BY MR. AXELRAD:

15 Q Do you have any other corrections, Dr. Broom?

16 BY WITNESS BROOM:

17 A Yes. On page 18, on line 46, the last full  
18 line on the page, I would like to change near the end  
19 of that line the two words "more than."

20 I would like to delete those two words and  
21 insert the word "approximately," so that it would read  
22 "to approximately 500 at present.

23 The next change that I have is on Attachment 1,  
24 following page 54, that organization chart.

25 I'll try to direct your attention to the proper

1 block. If you look at the lowest level of blocks on the  
2 chart, and the one on the left of those two, it reads,  
3 "Marine Industries & Heavy Construction Group, Group Vice  
4 President."

5 That is a misprint, and the word should be  
6 "Mineral" instead of "Marine." It should be "Mineral  
7 Industries & Heavy Construction Group."

8 My last correction is some updating of Attachment  
9 2, the next page.

10 I direct your attention to the top of the  
11 chart, showing Mr. Rice and myself. Coming down to the  
12 first branch line, that is the first block to the left  
13 at the top of the chart, headed, "Mid-Valley, Inc."

14 That entire block should be removed from the  
15 chart.

16 An organizational realignment has placed that  
17 part of the company under different management. It is  
18 no longer a part of the Power Group.

19 My last change is two name changes in the  
20 South Texas Project block. If you'll come down the center  
21 line through "Operations, Mr. Grote, then the line under  
22 him branching to the right to the box headed, "South Texas  
23 Project.

24 The first name listed, "J. R. Geurts," should  
25 be deleted and the name "E. A. Saltarelli" should be inserted.



1                   Immediately below that, the next name appearing,  
2 "C. L. Crane" should be deleted, and the name "J. A. Thompson"  
3 should be inserted.

4                   JUDGE BECHHOEFER: Does Thompson have a P?

5                   WITNESS BROOM: Yes, I'm sorry, T-h-o-m-p-s-o-n.

6 BY MR. AXELRAD:

7                   Q       Dr. Broom, this testimony was submitted back  
8 in April.

9                   Do you have any comments to make with respect  
10 to the portions of the testimony dealing with your visits  
11 to the site and location of QA and monthly meetings?

12 BY WITNESS BROOM:

13                   A       Yes. I would simply like to make one statement  
14 in clarification.

15                   There are two references, I believe, in my  
16 testimony to the fact that I have spent so many days per  
17 month on the average at the project site, and also a reference  
18 to the fact that the Quality Assurance Management Review  
19 Board has been holding monthly meetings at the site.

20                   Due to the onset of these hearings in May,  
21 my time has been occupied in attendance at these hearings,  
22 and I have not visited the site during working hours during  
23 the month of May, and the Quality Assurance Management  
24 Review Board meeting for May had to be held here in Houston  
25 since all of the participants, or most of the participants,

1 in that Board were here in the city due to these hearings.

2 It does not in any way change our commitment  
3 to devote time to the site and hold meetings at the site,  
4 but the physical location of these hearings has precluded,  
5 during that period of time and for whatever time the hearings  
6 conceivably spend, to possibly detracting from the amount  
7 of time available that we have to spend at the site.

8 Q Mr. Vurpillat, does your testimony in this  
9 proceeding consist of those answers in the document that  
10 you have before you which are preceded by your initials  
11 "RJV"?

12 BY WITNESS VURPILLAT:

13 A Yes.

14 Q Do you have any corrections or additions to  
15 such answers?

16 BY WITNESS VURPILLAT:

17 A Yes, I do.

18 The first correction is on page 5, beginning  
19 on line 35.

20 If you will, delete the words "as the district  
21 manager for Pittsburgh Testing Laboratory," and substitute  
22 instead the words "with Pittsburgh Testing Laboratory,  
23 comma, five of which were as a district manager," so that  
24 that sentence now reads, "Prior to joining Brown & Root,  
25 I spent eight years with Pittsburgh Testing Laboratory,

1 five of which were as a district manager, where I was  
2 responsible," et cetera.

3 The next change is also on page 5 in line  
4 48, the last line.

5 If you'll delete the last two words in that  
6 line, "a partner," and substitute instead "an associate."

7 One final change, on page 51, I would like  
8 to add a new paragraph between the paragraph ending on  
9 line 38 and the one starting on line 40.

10 That paragraph reads, "In May 1981, comma,  
11 Mr. A. W. Smith joined Brown & Root as Project Quality  
12 Assurance Manager, and is assigned at the project site,  
13 period. Mr. Smith has 26 years of QA/QC experience, including  
14 significant experience related to nuclear construction  
15 and --"

16 JUDGE BECHHOEFER: Would you slow up a little  
17 bit?

18 WITNESS VURPILLAT: Surely. Sorry.

19 JUDGE BECHHOEFER: "Significant experience  
20 related to..." what?

21 WITNESS VURPILLAT: "...nuclear construction."

22 JUDGE BECHHOEFER: Okay. Go ahead.

23 WITNESS VURPILLAT: "...and to powerplant  
24 design and construction." That's the end of that paragraph.

25 If you'd like, I'll read it back.

1 JUDGE BECHHOEFER: I think that might be useful.

2 WITNESS VURPILLAT: All right.

3 The new paragraph to be inserted between lines  
4 38 and 40, the present 38 and 40, will read:

5 "In May 1981 Mr. A. W. Smith joined Brown  
6 & Root as Project Quality Assurance Manager, and is assigned  
7 at the project site. Mr. Smith has 26 years of QA/QC  
8 experience, including significant experience related to  
9 nuclear construction and to powerplant design and construction."

10 I'm sorry, there is one more change, and it's  
11 back on page 6.

12 On line 14, the last part of that line reads,  
13 "and QA planning related to 7." Change the number "7"  
14 to "11."

15 That's all the changes I have.

16 BY MR. AXELRAD:

17 Q Dr. Broom, as you have corrected it this morning,  
18 is your testimony true and correct, to the best of your  
19 knowledge and belief?

20 BY WITNESS BROOM:

21 A. It is.

22 Q Mr. Vurpillat, is your testimony, as you have  
23 corrected it this morning, true and correct, to the best  
24 of your knowledge and belief?

25 //

1 BY WITNESS VURPILLAT:

2 A Yes, it is.

3 MR. AXELRAD: Mr. Chairman, I move that the  
4 document entitled, "Testimony on Behalf of Houston Lighting  
5 & Power Company, et al. of Dr. Knox M. Broom, Jr.,  
6 Mr. Raymond J. Vurpillat on B&R Management and STP QA  
7 Program," as corrected this morning, be accepted into  
8 evidence and bound into the record as if read.

9 JUDGE BECHHOEFER: Any objection?

10 MR. JORDAN: I have a potential objection  
11 at page 11, Answer 17, that I think with a very brief  
12 voir dire, I might be able to clear up.

13 JUDGE BECHHOEFER: Fine.

14 MR. JORDAN: If I may proceed?

15 JUDGE BECHHOEFER: Yes, you may.

16 VOIR DIRE EXAMINATION

17 BY MR. JORDAN:

18 Q On page 11, Question 17 is: "Was this organization  
19 in compliance with applicable industry practices and NRC  
20 requirements?"

21 Dr. Broom, you testify in Answer 17: "Yes,  
22 the QA Program, including a description of the organization,  
23 was described in the PSAR for the STP and was thoroughly  
24 reviewed by the NRC, as well as HL&P, and found to be  
25 acceptable as evidenced by the approval of this program

1 in the NRC Safety Evaluation Report and the issuance of  
2 the construction permits for the STP in December 1975."

3 My question is whether your response of, "Yes,"  
4 is based on what is outlined in the remainder of the sentence,  
5 which is the fact that the program was found acceptable,  
6 as shown in the NRC Safety Evaluation Report and the issuance  
7 of the construction permit?

8 Is that the basis for your answer?

9 BY WITNESS BROOM:

10 A Yes, I think so.

11 Obviously, I considered that to be evidence  
12 of its being satisfactory, but I also think that the client's  
13 review of it and our review of it insured that the program  
14 was acceptable.

15 Yes, I believe as I understand your question,  
16 that the answer is yes.

17 MR. JORDAN: I have no objection, Your Honor.

18 JUDGE BECHHOEFER: Mr. Hager?

19 MR. HAGER: No, we have no objection.

20 JUDGE BECHHOEFER: Staff?

21 MR. REIS: We have no objection.

22 JUDGE BECHHOEFER: The document will be admitted  
23 into evidence and bound into the record.

24 (See attached pages.)

25 - - -

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of: §  
§  
HOUSTON LIGHTING & POWER § Docket Nos. 50-4980L  
COMPANY, ET AL. § 50-4990L  
§  
(South Texas Project, §  
Units 1 & 2) §  
§

TESTIMONY ON BEHALF OF HOUSTON LIGHTING & POWER COMPANY, ET AL.

OF

DR. KNOX M. BROOM, JR.  
MR. RAYMOND J. VURPILLAT

ON

B&R MANAGEMENT AND STP QA PROGRAM

1  
2  
3 UNITED STATES OF AMERICA  
4 NUCLEAR REGULATORY COMMISSION  
5  
6  
7

8  
9  
10 BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

11 In the Matter of: §  
12 HOUSTON LIGHTING & POWER § Docket Nos. 50-498OL  
13 COMPANY, ET AL. § 50-499OL  
14 (South Texas Project, §  
15 Units 1 & 2) §  
16 \_\_\_\_\_ §  
17

18 TESTIMONY OF DR. KNOX M. BROOM, JR.  
19 AND RAYMOND J. VURPILLAT ON B&R  
20 MANAGEMENT AND STP QA PROGRAM  
21

22 Q. 1 State your names.  
23

24 A. 1 Knox M. Broom, Jr. (KMB) and Raymond J. Vurpillat  
25 (RJV).  
26

27 Q. 2 Dr. Broom and Mr. Vurpillat, by whom are you  
28 employed?  
29

30 A. 2 (KMB, RJV): Brown & Root, Inc. (B&R)  
31

32 Q. 3 Dr. Broom, what is your position and what are  
33 your current responsibilities?  
34

35 A. 3 (KMB): I am Senior Vice President of the B&R  
36 Power Group and Assistant to the Group Vice President. The  
37 Quality Assurance (QA) Department of the Power Group, which  
38 has responsibility for the B&R QA Program for the South  
39 Texas Project (STP), reports to me.  
40

41 Q. 4 Mr. Vurpillat, what is your position and what are  
42 your current responsibilities?  
43  
44  
45  
46  
47  
48  
49  
50  
51



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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

A. 4 (RJV): I am the Manager of the B&R Power Group QA Department and report to Dr. Broom. I am responsible for the management and direction of all QA Programs implemented within the B&R Power Group, including the B&R STP QA Program.

Q. 5 Dr. Broom, please summarize your professional qualifications.

A. 5 (KMB): I have a Ph.D. in chemistry from the University of Arkansas and a Master of Science Degree from the University of Arkansas, where the bulk of my studies involved nuclear chemistry and physics. I have a BA degree from the University of Southern Mississippi where I majored in chemistry and mathematics. I have worked in nuclear power and nuclear power research for more than 17 years. I am a member of the American Nuclear Society, American Chemical Society, American Society for Quality Control, and other professional organizations. I am a registered nuclear engineer in the state of California.

Q. 6 When did you join B&R?

A. 6 (KMB): I joined B&R in August of 1972.

Q. 7 What did you do prior to joining B&R?

A. 7 (KMB): My position immediately preceding my joining B&R was Manager of Nuclear Activities for Middle South Services, a subsidiary of Middle South Utilities, Inc. There, I assisted in the project management of five nuclear units at the operating companies of the Middle South System,

1  
2  
3 and a part of my responsibilities included helping establish  
4 the early QA/QC Programs which were required for these  
5 nuclear power projects. Prior to my work at Middle South  
6 Services, I worked for one year at the Atomic Energy Commis-  
7 sion, where I administered research contracts involving  
8 fuels and materials development pertaining to nuclear power.  
9 Prior to that, I was employed by Atomics International, a  
10 subsidiary of North American Rockwell, where I was involved  
11 in research work pertaining to nuclear reactors.

12  
13  
14 Q. 8 Describe the positions you have held with B&R and  
15 give approximate dates.

16  
17 A. 8 (KMB): On joining B&R in 1972, I worked for one  
18 year in Business Development following which I transferred  
19 to the Power Engineering Department where I was responsible  
20 for Nuclear Licensing and QA. In June of 1975, the Power  
21 Group was formed, and shortly thereafter, my responsibility  
22 for the QA Department was transferred to report directly to  
23 the Group Vice President for Power. I was promoted to Vice  
24 President of Power Engineering in December 1976. My responsi-  
25 bilities from June of 1975 until June of 1979 continued in  
26 the engineering area. In June of 1979, I was made Assistant  
27 to the Group Vice President of Power Group. In this position,  
28 the QA Department again reported directly to me and the  
29 Group Vice President. In summary, my responsibilities with  
30 regard to the B&R QA Department for the Power Group began in  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1973 and continued through the formative stages of our program for the STP until a period of approximately six months before the construction permits were issued. Then, I assumed responsibility for the QA Department again in the summer of 1979, and the QA Department has continued to report to me since that time.

Q. 9 Mr. Vurpillat, when did you join B&R?

A. 9 (RJV): I joined B&R in August of 1980 in my present position.

Q. 10 Please summarize your professional qualifications and experience.

A. 10 (RJV): I have a Bachelor of Science degree from Purdue University. I am a Registered Professional Engineer (PE) in Indiana and California. I am also a member of the American Society for Quality Control, and a member of various American Concrete Institute (ACI) and American Society of Mechanical Engineers (ASME) committees. Prior to joining B&R, I spent eight years as the district manager for Pittsburgh Testing Laboratory where I was responsible for planning and supervision of all phases of inspection and testing functions related to medium to large construction projects; four years as Director of Quality Control (QC) for the Warner Company, a construction materials company, where I was responsible for attaining and maintaining the quality of concrete materials and ready mixed concrete production; one year as a partner

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

in a construction business involved primarily in concrete construction related to medium-sized private and commercial projects; and twelve and one-half years as Assistant QA Manager for United Engineers and Constructors where I was involved in the planning, management, and supervision of QA Programs related to design and/or construction of 16 commercial nuclear power plants, and QA planning related to 7 other nuclear plants that never reached the construction permit stage. I was also involved in the same functions related to many non-nuclear projects including more than 10 fossil-fueled power plants.

Q. 11 Dr. Broom and Mr. Vurpillat, please describe the purpose of your testimony.

A. 11 (KMB, RJV): The purpose of our testimony is to describe the B&R organization, the development of the B&R QA Program for STP, the management involvement in the STP QA Program, and the responses of B&R to the NRC enforcement actions against STP.

Q. 12 Dr. Broom, briefly describe the history and organizational structure of B&R.

A 12 (KMB): B&R is a subsidiary of Halliburton, Inc. and is one of the world's largest engineering and construction firms offering its services to a broad spectrum of industries including power, petroleum and chemicals, marine, manufacturing, forest products, mining, heavy civil, and

1  
2  
3 others. Currently, B&R employs more than 70,000 people. In  
4 its more than 60 year history, B&R has performed engineering,  
5 construction, and project management services on a wide  
6 variety of projects worldwide. These projects have ranged  
7 in size from small local maintenance services to multi-billion  
8 dollar grass roots projects of many types.

9  
10 B&R is organized into industry groups, each headed by a  
11 senior executive who reports to the President and Senior  
12 Executive Vice President. The group executives, the President,  
13 and the Senior Executive Vice President form the Operating  
14 Committee of the company which meets regularly to establish  
15 corporate policy and review the company's performance and  
16 planning. Attachment No. 1 shows this organizational  
17 structure of B&R.

18  
19 The B&R industry group that is directly responsible for  
20 the STP is the Power Group, which is headed by W. M. Rice,  
21 Group Vice President. This group performs engineering and  
22 construction of power generation projects for many utility  
23 and industrial clients. To date, the Power Group has per-  
24 formed engineering and/or construction activities for over  
25 100 fossil or nuclear power units (with over 75 units in  
26 operation) consisting of more than 40,000 MWE of power  
27 generation. The organization of B&R Power Group is shown in  
28 Attachment No. 2. The primary elements of this organization  
29 are engineering, construction, operations (which include  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 project management) and QA--all which report separately and  
4 independently to Power Group Management.  
5

6  
7 Our company is affected by numerous government laws and  
8 regulations which apply to various areas of our business.  
9  
10 We have many formal procedures which are followed to ensure  
11 compliance with these laws and regulations. Examples of  
12 these are our system of procedures for OSHA, financial  
13 reporting, EEOC, and, of course, QA. These systems provide  
14 for internal audits, as well as audits by outside agencies,  
15 to verify compliance.  
16  
17

18  
19  
20  
21 Q. 13 What is B&R's prior experience with large scale  
22 construction projects?  
23

24  
25 A. 13 (KMB): B&R has performed engineering, construc-  
26 tion, and project management services on many large scale  
27 projects. Included have been many projects for the U. S.  
28 Government, Corps of Engineers, Department of Defense, NASA,  
29 and other agencies which have required compliance with  
30 exacting codes, standards, and military specifications.  
31  
32 Examples of projects we have developed are the manned space-  
33 craft center in Houston, Texas, minuteman missile installa-  
34 tions, highways, bridges, dams, airfields, and shipyards to  
35 name but a few.  
36  
37

38  
39 A wide variety of large scale industrial projects  
40 completed by B&R include power plants of all types (coal,  
41 oil, gas, nuclear, and hydro-electric), refineries, pipelines,  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 offshore oil and gas platforms, papermills, mines and smelters,  
4 and petro-chemical complexes.  
5

6 Q. 14 How does B&R organize and manage a large project?  
7

8 A. 14 (KMB): For most large projects B&R utilizes a  
9 Project Management System and a Project Task Force concept.  
10 A Project Manager is given full authority and responsibility  
11 for execution of a given contract and all of the necessary  
12 resources--manpower and material--are assigned to the Project  
13 Manager as long as required for the project. We assign  
14 people and dedicate the required office space for the per-  
15 formance of the home office functions--engineering, pro-  
16 curement, scheduling, cost control, administration--and at  
17 the project site, we assign the construction forces and  
18 equipment required for the project. The Project Manager is  
19 given full control over these resources. Similarly, on  
20 nuclear power projects, we dedicate the necessary QA personnel  
21 as a project team under the direction of a Project QA Manager  
22 who reports independently from the Project Manager to Power  
23 Group Management.  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37

38 On all major projects, B&R provides frequent executive  
39 contacts between the client management and B&R management to  
40 assure our client of our interest in and attention to his  
41 project and to provide an overview of the status and progress  
42 of our work.  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 Q 15 How did B&R first become involved in the nuclear  
4 field? What were its qualifications to design and construct  
5 a nuclear power plant?  
6  
7

8 A. 15 (KMB): B&R began its efforts to enter the field  
9 of nuclear power in the mid-1960's by recruiting employees  
10 experienced in the nuclear field, and in 1967, received its  
11 first contract from Carolina Power & Light Company to perform  
12 construction, field procurement, and related quality assurance  
13 activities for the Brunswick Steam Electric Station. This  
14 project consisted of two-821 BWR units located at Southport,  
15 North Carolina. In 1973, as the Brunswick Project was  
16 nearing completion, B&R was awarded a contract of similar  
17 scope by Texas Utilities, Inc. for its Comanche Peak Steam  
18 Electric Station consisting of two-1150 Mw PWR units located  
19 near Granbury, Texas.  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29

30 These two projects established a sound base in construc-  
31 tion and QA activities associated with nuclear power plants.  
32  
33

34 However, B&R was also interested in performing nuclear  
35 plant design and engineering. Through the latter part of  
36 the 1960's, recruiting efforts continued to obtain experienced  
37 personnel in the nuclear design field and in November 1970,  
38 B&R purchased an equity position in the NUS Corporation, a  
39 company highly respected for engineering and consulting  
40 activities related to nuclear power. By 1973, we had  
41 assembled a good nucleus of design personnel and with our  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51



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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

association with NUS and access to its personnel, were prepared to provide design engineering services for a nuclear power plant project. In that year, we initiated work on STP for the design, procurement, construction, and related QA activities for the STP.

Q. 16 At the time you became involved in B&R's QA Program for STP, how was the program organized?

A. 16 (KMB): Originally, when the STP PSAR was prepared in 1974, the QA Department reported to the Engineering Department and was separate from the Construction Department. The internal organization of the QA Department followed in the traditional lines of quality engineering, inspection, services to support the various organizations, a vendor surveillance section, and an auditing section.

Prior to the issuance of the construction permits for STP, the B&R Power Group was formed under which engineering and construction both reported to one group executive. The QA organization was transferred to report directly to the head of the Power Group, thereby being entirely independent from the engineering and construction organizations. That organizational arrangement has continued to the present.

Q. 17 Was this organization in compliance with applicable industry practices and NRC requirements?

A. 17 (KMB): Yes, the QA Program, including a description of the organization, was described in the PSAR for the

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

STP and was thoroughly reviewed by the NRC as well as HL&P and found to be acceptable as evidenced by the approval of this program in the NRC Safety Evaluation Report and the issuance of the construction permits for the STP in December 1975. The B&R QA organization is very similar to that which is found in many engineering and construction companies engaged in nuclear power plant activities.

Q. 18 Was this organization similar to those used on other projects with which you are familiar?

A. 18 (KMB): Yes, the STP QA Program provided by B&R is entirely analogous to that found on most nuclear projects. Details of the organizational structure vary from project to project, but no significant differences exist of which I am aware. From the outset, the QA organization for STP has provided QA/QC services for design, procurement, and construction activities supplied by B&R, with HL&P providing oversight or surveillance activities in all of the corresponding areas. This arrangement is quite common.

Q. 19 At the time you first became involved in the QA Program at B&R, what was B&R's attitude toward quality?

A. 19 (KMB): I first became involved in nuclear QA at B&R in 1974 in conjunction with B&R's construction activities at the Brunswick Steam Electric Station for Carolina Power & Light Company. This project was underway when the original QA/QC criteria (10 CFR 50, Appendix B) were issued which

1  
2  
3 required a formal QA Program in compliance with these regula-  
4 tions. A program had been established in compliance with  
5 these regulations and was in effect at the Brunswick project.  
6 From my first involvement, I believe that B&R's management  
7 had the proper attitude concerning nuclear QA/QC requirements,  
8 and that our project personnel generally reflected this same  
9 attitude.  
10  
11  
12  
13  
14

15 Management's commitment to the importance of QA/QC on  
16 nuclear projects was expressed on many occasions to its  
17 personnel both at the Brunswick project, and at the Comanche  
18 Peak and the South Texas Projects, which were in the early  
19 planning stages. These expressions were designed to impress  
20 upon project personnel that nuclear QA requirements are  
21 especially stringent and should be fully complied with.  
22 Furthermore, in that period of the history of the nuclear  
23 industry, the QA/QC requirements were evolving quite rapidly.  
24 We encountered problems in adding requirements in mid-stream  
25 and ensuring that personnel met these additional requirements.  
26 As a result, B&R management was directly involved in these  
27 projects and aware of the importance of an adequate QA/QC  
28 program. As an example of B&R management's early recognition  
29 of the importance of the nuclear QA/QC project requirements,  
30 a policy was established for STP in 1976 under which all new  
31 B&R employees at a nuclear project received a formal nuclear  
32 QA orientation program.  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 Q. 20 Describe the senior B&R management activities  
4 which evidenced their commitment to QA/QC in nuclear projects.  
5

6 A. 20 (KMB): The senior management of B&R has been  
7 involved in our QA activities from my earliest knowledge of  
8 our projects. At the Brunswick station, our management,  
9 including senior officers and an executive vice president,  
10 attended meetings frequently with the client at the site to  
11 discuss specifically the status of our QA Program and the  
12 steps being taken to ensure that all requirements were met  
13 prior to the operating license.  
14  
15  
16  
17  
18  
19  
20

21 In October of 1973, the Executive Vice President of B&R  
22 established the QA Management Review Board (QAMRB) which was  
23 composed of senior management executives of B&R in order to  
24 provide an oversight of our QA programs for nuclear as well  
25 as fossil power plant projects and to report periodically to  
26 the top management of the Company. The membership of this  
27 Board presently includes the Group Vice President of Power,  
28 all of the senior officers in the Power Group, a representa-  
29 tive from our Procurement Group and the Power Group QA  
30 Manager. This Board has met regularly since its establishment  
31 to receive reports from the QA Manager concerning the status  
32 of our QA program. In addition to these periodic meetings,  
33 the QAMRB members regularly receive a compendium of significant  
34 QA documents as an additional means of staying abreast of QA  
35 Program activities.  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

An additional and important responsibility of the QAMRB has been an annual QA/QC Program review, that is performed for the QAMRB by B&R management personnel with the assistance of outside consultants, Management Analysis Company and Southwest Research Institute. The purpose of this review is to determine the effectiveness of the overall QA Program in the B&R Power Group. These reviews have evaluated the B&R Power Group QA Program including the STP. The reviews are generally broken down according to the 18 QA criteria of 10 CFR 50, Appendix B, and are used by senior B&R executives to closely monitor areas of the B&R QA Program which require special attention or corrective action. The results of each of these reviews are carefully evaluated and fully discussed at the QAMRB meetings; and for those findings where corrective action is determined to be appropriate, management makes assignments to the affected B&R organizations and requires written responses describing those corrective actions.

In addition, since the beginning of the project, the Operating Committee of B&R has received an annual review of the QA Program associated with the STP presented by the QA Manager of the Power Group. Beginning in September 1980, the Operating Committee has received a briefing on the STP QA program monthly. Such activities demonstrate that the senior management of B&R is properly involved in the project to ensure that sufficient resources are provided for the conduct of the project in a timely fashion.

1  
2  
3 Management policy concerning our dedication to full  
4 compliance of all quality requirements has been communicated  
5 to project personnel through written and verbal communications.  
6 For example, we have had letters signed by senior company  
7 officials throughout the course of the Project stating the  
8 company policy of full compliance of all QA requirements,  
9 and these letters have been posted in visible locations at  
10 the site and in the Houston offices and have been incorporated  
11 in the Project QA manuals. There have also been presentations  
12 by senior officials of the B&R Power Group to Project personnel  
13 stating our management policy. For example, in the summer  
14 of 1979, J. G. Munisteri, the Group Vice President of the  
15 Power Division, spoke to all QA/QC personnel and construction  
16 supervision at the project site emphasizing our full commit-  
17 ment to strict compliance with all QA requirements.  
18

19  
20  
21 Finally, since the inception of the project, senior B&R  
22 management officials have made frequent visits to the STP  
23 site and have met and discussed project activities with a  
24 variety of Project personnel. This has been in recognition  
25 of the importance of direct Project visibility and involve-  
26 ment by senior B&R management. In late 1979 and early 1980,  
27 with the increased concerns raised about management of the  
28 B&R QA Program for STP, senior management visits to the site  
29 have been more frequent. In my own case, since the beginning  
30 of 1980, I have spent a minimum of two to three days a month  
31 at the site.  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

Q. 21 Please give the other examples of specific actions taken by B&R Senior Management which indicated a commitment to the STP Quality Assurance Program.

A. 21 (KMB): One example that comes to mind is a meeting held in early 1978 at which M. M. Fitch, Senior Vice President, Power Construction, met at the STP site with key construction and QA/QC supervisory personnel. At this meeting, Mr. Fitch emphasized senior management's requirement that all Project personnel fully comply with Project quality requirements. He further emphasized the need for professionalism in Construction/QC relationships.

Another example of Senior Management's involvement in assuring that friction between Construction and QA was minimized occurred in early 1979, when J. C. Bazor, the then newly appointed Vice President of Power Construction, held a meeting at the site with key supervisory personnel. At this meeting, Mr. Bazor reaffirmed the B&R management philosophy that B&R Management would not tolerate any circumstance in which a B&R Construction employee acted unprofessionally, and that Management would not hesitate to dismiss any employee violating this policy.

Q. 22 Please give some examples of steps taken by QA Management prior to the NRC Show Cause Order which reflect QA Management's effort to maintain an effective, and well-motivated Project QA/QC organization.

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

A. 22 (KMB): In the area of organization, the project QA organization was originally conceived along traditional lines that provided for QC inspection, vendor surveillance, and support activities. However, this organization has not been static through the course of the project.

In 1976, we recognized the need for increased quality engineering support for QC Inspectors, and technically competent discipline engineers were added at the site. In 1978, a full-time vendor surveillance representative was located at the site to improve coordination between vendor surveillance and site operations. In 1978, we added full-time schedulers to the Project QA organization to assist in planning and scheduling manpower, training and procedure requirements. In 1978, we reassigned Quality Engineers and QC Inspectors on the basis of plant areas rather than technical disciplines in order to parallel the Construction organization and provide better coordination and mutual understanding. In 1979, regional vendor surveillance offices were established to provide closer control of suppliers. Finally, since the beginning of the Project, QA Management has recognized the importance of adequately staffing the Project with experienced personnel and has conducted an ongoing nationwide recruiting campaign. As a result, our QA Department manpower level has increased from less than 100 in 1975, to more than 500 at present.



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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

In the area of QA employee relations, significant improvements were initiated by QA Department Management in 1979 and early 1980 in recognition of the importance of regular management meetings, adequate pay and benefits, and employee recognition, including monitoring and responding to individual employee concerns arising in the course of the Project. Frequent meetings were held with Project personnel and QA Management to communicate policies and to get feedback from employees. Although agreement was not always reached on each employee complaint, all cases were reviewed and evaluated.

Through the initiative of QA management, as the Project progressed, better working conditions were created by providing air conditioned field offices, additional field radios and trucks, increased relocation benefits, overtime pay for salaried personnel, better QA tools, special visible recognition of QA supervisors, and improved pay levels and policies. Offsite recreational activities and civic projects were sponsored and encouraged such as softball games and community clean-up projects. Written communication was provided through information memos and bulletins, and company publications such as the Brownline, Brown-Newser, and Brownbuilder.

In 1979 as concrete activities accelerated, management instituted a requirement that a minimum of 24 hours be set aside for each concrete preplacement inspection (or longer

1  
2 if required) to preclude any construction activities such as  
3 personnel and trucks standing by that could create pressure  
4 on the Inspectors to hurry their work to release a pour.  
5  
6

7  
8 Of course, normal management functions were performed  
9 such as regular personnel performance evaluations. Inter-  
10 discipline development, reassignments, and promotions were  
11 encouraged to improve personnel opportunity and growth.  
12  
13

14  
15 Finally, a number of actions were taken to improve  
16 mutual understanding and reduce friction between Construction  
17 and QA personnel. For example, in June 1978, construction  
18 and inspection procedures were integrated to define and  
19 clarify operational interfaces, improve planning and schedul-  
20 ing, and promote cooperation. In August 1979, a Task Force  
21 was established by Engineering, Construction, and QA to  
22 clarify the inter of specification terms such as "flat",  
23 "straight," "no free standing water," and similar items  
24 which require interpretation. In 1977, a weld defect report-  
25 ing system was established to improve Construction awareness  
26 of the nature of welding problems. In 1978, in-process  
27 punch lists to note and control actions required prior to  
28 formal inspection steps were established. These and many  
29 other actions were taken to facilitate daily operations by  
30 improved understanding and cooperations.  
31  
32

33  
34 Q. 23 Please give some examples of steps taken by QA  
35 Management prior to the NRC Show Cause Order which reflect  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 QA Management's effort to assure proper QA/QC personnel  
4 training.  
5

6 A. 23 (KMB): In the area of personnel training, since  
7 the inception of the Project, new employees have received a  
8 presentation relative to orientation for nuclear projects  
9 which emphasizes the special nature and quality requirements  
10 for nuclear projects. All QA personnel also attend overview  
11 slide/tape presentations relative to nuclear Codes and  
12 Standards and quality records. A study brochure supplements  
13 these presentations.  
14  
15  
16  
17  
18  
19  
20

21 Since the beginning of the Project numerous diverse  
22 in-depth training courses have been presented for Construction,  
23 Engineering, and QA personnel. In addition to technical  
24 training, operating procedures and procedural changes were  
25 covered. Beginning in 1978, Construction and QA personnel  
26 attended joint training programs so as to develop common  
27 understanding and interpretations. Opportunities have been  
28 created for interdiscipline cross training to broaden personnel  
29 opportunities and flexibility. This training has also  
30 encouraged development of less-skilled employees so that as  
31 performances of entry level Inspectors progressed, they  
32 could achieve higher levels of certification.  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42

43 Various management training courses by B&R, outside  
44 specialists, and video tape/programmed instruction have been  
45 presented. Again many of these courses were attended jointly  
46  
47  
48  
49  
50  
51

1  
2  
3 by Construction and QA Supervisors so as to improve interrela-  
4 tionships and understandings.  
5  
6  
7

8  
9 Although training courses were frequent within B&R both  
10 at the site and in Houston, additional professional develop-  
11 ment was also encouraged by other means. Included were such  
12 activities as outside technical training by ACI, ASNT, ASME,  
13 and other outside organizations; membership on technical  
14 committees of national societies; attendance at seminars and  
15 technical conferences; and participation in the Nuclear  
16 Plant Reliability System and the Coordinating Agency for  
17 Supplier Evaluations.  
18  
19  
20  
21  
22

23 Q. 24 Describe HL&P's involvement in the development  
24 and review of B&R's STP Quality Program.  
25  
26

27  
28 A. 24 (KMB): B&R's QA Program for STP is under the  
29 programmatic direction of HL&P. B&R's QA Program for the  
30 STP was initially described in writing as a part of the  
31 preparation for the STP PSAR. This description was reviewed  
32 in detail by HL&P and its comments were resolved to its  
33 satisfaction to ensure that B&R's program and HL&P's program  
34 were fully compatible. At various times since the develop-  
35 ment of the original program, modifications to the program  
36 concerning various procedures and detailed instructions  
37 have been made. The QA procedures were submitted to HL&P  
38 for its review and comment prior to implementation. HL&P  
39 has performed a surveillance function over all of the B&R QA  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 Program activities since initiation of the Project. This  
4 includes on-site surveillance activities, HL&P vendor sur-  
5 veillance inspection personnel accompanying B&R vendor  
6 surveillance inspection personnel on shop inspections, joint  
7 participation in audits and, of course, separate and independ-  
8 ent audits conducted by HL&P of B&R's QA activities.  
9  
10 Monthly meetings on the QA programs have been held with HL&P  
11 for virtually the duration of the Project. There is a  
12 continuing dialogue on nearly a daily basis between HL&P's  
13 STP QA Manager and B&R's Project personnel. Audits which  
14 are performed by B&R's Audit Group are discussed in exit  
15 critiques which HL&P personnel often attend. B&R has invited  
16 and HL&P has attended the exit critiques of the NRC's Vendor  
17 Inspection Branch inspections of B&R's activities.  
18  
19  
20  
21  
22  
23  
24  
25  
26

27  
28 Our standard practice at B&R on the STP has been to  
29 keep HL&P fully informed of all activities and problems as  
30 they arise on the Project. HL&P has taken a strong leader-  
31 ship role, as is expected of the Licensee, and has provided  
32 guidance and direction of the entire program through the  
33 life of the Project. HL&P has performed audits of the B&R  
34 program by independent auditing groups separate from its STP  
35 QA organization since the inception of the Project. These  
36 audits have been thorough and have pointed out areas where  
37 our program could be improved and the improvements indicated  
38 have been implemented.  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2 Q. 25 For the period between the issuance of the  
3 construction permit in December 1975, and the NRC's special  
4 investigation in late 1979 and early 1980, what is your  
5 personal assessment of the QA program for STP?  
6  
7  
8

9  
10 A. 25 (KMB): During this period, the B&R QA program  
11 and the HL&P Company QA program maintained surveillance and  
12 auditing of the STP activities. A number of deficiencies  
13 concerning implementation of procedures were discovered.  
14 Inspection and surveillance personnel identified many indi-  
15 vidual items of nonconformance, such as components or materials  
16 which did not precisely meet specification requirements.  
17 The deficiencies were corrected, as is evidenced by close-outs  
18 of nonconformance reports, corrective action requests, and  
19 audit deficiency reports.  
20  
21  
22  
23  
24  
25  
26  
27

28 In my experience, the number of findings and the types  
29 of findings are representative of those found on most nuclear  
30 construction projects. B&R and HL&P had identified problem  
31 areas in which improvements had been made and others in  
32 which improvements were underway at the time of the NRC  
33 special investigation. Although you can never be completely  
34 satisfied with your performance, on balance, I believe the  
35 QA program for the Project was effective and that areas of  
36 nonconformance were identified and under control, although  
37 patterns of nonconformances were not always picked up as  
38 promptly as they should have been, especially in the welding  
39 area.  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 One area where I believe we might have done a better  
4 job is in trending deficiencies as they occurred on the  
5 Project. Although informal trending was done, I believe we  
6 should have had a more formal trending program to document  
7 the recurrence of nonconformances. Also, I believe we  
8 should have provided a more efficient document control and  
9 retrieval system. Although basically under control, on  
10 occasions it took substantial time to locate and assemble  
11 documentation.  
12  
13  
14  
15  
16  
17  
18

19 Q. 26 Please comment on the STP problems relating to  
20 soils, concrete and welding, in light of your answers to the  
21 preceding questions. What do these problems reveal about  
22 the QA program? What do they indicate about the overall  
23 structural integrity of the plant?  
24  
25  
26  
27

28 A. 26 A nuclear QA program requires that all defi-  
29 ciencies or deviations from project requirements be docu-  
30 mented as nonconforming conditions. As I indicated earlier,  
31 many instances of nonconformance have occurred on STP just  
32 as they occur on any such project. The vast majority of  
33 these deficiencies are of little safety significance and are  
34 corrected quite easily. In other instances, significant  
35 deficiencies occurred at the Project, and were recognized as  
36 being significant and were reported to the NRC. The voids  
37 found in some complex concrete placements are an example of  
38 such a deficiency. In the placement of concrete in areas of  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

extreme rebar congestion, steps were taken to avoid the creation of voids. Unfortunately, due to the configuration of embedded steel and rebar, some voids did occur. This has required additional precautions which have been taken to avoid recurrence. In all cases, these voids were detected and have been repaired. This is not an uncommon occurrence in placing concrete in situations such as I have described.

Furthermore, it is important not to lose perspective. The concrete problems we encountered were not atypical and the structural strength of our concrete has been found to be quite acceptable. Similarly, while we have had procedural problems in the soils area - mainly due to misunderstandings or poor communications - we should not lose sight of the findings of our Task Force as to the adequacy of our soil compaction work. It is only in the area of welding where we fell down. We recognize this area of deficiency and are taking steps to repair existing deficient welds and to prevent recurrence of such problems in the future.

Our welding problems at the site were attributable to a failure to insure that the many welding and inspection procedures we had on paper were fully and properly implemented. Our welding program, as set out in those procedures, was in accordance with all Codes and standards and, if properly implemented, would have produced uniformly high quality welds. However, we now know that the welding procedures



1  
2  
3 were not always being fully implemented, and that our  
4  
5 Inspectors were unfortunately not always picking up failures  
6  
7 in procedural implementation, and were not always performing  
8  
9 close-enough inspections of the welds themselves to assure  
10 Code compliance. While it is unfortunate that these pro-  
11  
12 cedural and inspection deficiencies occurred, it is important  
13  
14 to point out that our QA auditing system did detect the  
15  
16 deficiencies and focus attention on the magnitude of the  
17  
18 problem. The audit findings resulted in our stopping all  
19  
20 safety-related welding in April 1980 pending a comprehensive  
21  
22 reassessment and revamping of the welding program.

23 We have taken rigorous steps to assure that all proce-  
24  
25 dures will be fully implemented and that welds will be  
26  
27 properly made, and also to assure that when non-compliances  
28  
29 do occur they will be immediately identified by QA. We have  
30  
31 taken steps to control the welding procedures and inspections,  
32  
33 to retrain and requalify welders, and to recertify inspection  
34  
35 personnel to make sure that any deviations from the literal  
36  
37 interpretation of code requirements are identified as discrep-  
38  
39 ancies and the appropriate repairs made. In addition, we have  
40  
41 created the position of STP welding Program Manager and staffed  
42  
43 this position with a highly qualified individual. The Program  
44  
45 Manager is charged with coordinating implementation of all  
46  
47 welding program procedures. Thus, quality welding will be  
48  
49  
50  
51

1  
2  
3 assured not only through a tighter QA Program, but also  
4 through better control and coordination of welding procedures.  
5

6 In the areas of safety related welding, concrete, and  
7 backfill, we have assembled special B&R/HL&P task forces, as  
8 well as panels of experts from outside the Project to exten-  
9 sively investigate the adequacy and structural integrity of  
10 the work performed at the Project. Their reports have  
11 concluded that the backfill, as placed, is entirely adequate  
12 for the design requirements of this Project, and that in the  
13 case of concrete, there is no reason to suspect any additional  
14 voiding or substandard conditions associated with the struc-  
15 tural integrity of the concrete beyond those voids in complex  
16 areas which were identified previously. Further, the repairs  
17 which have been made to those areas were found to be satis-  
18 factory to ensure the structural integrity of the concrete.  
19 With regard to welding, our welding program has been strength-  
20 ened substantially and reinspection and repair of previous  
21 welding is underway.  
22  
23  
24  
25  
26  
27

28  
29  
30  
31  
32  
33  
34  
35  
36 Q. 27 How has HL&P kept itself knowledgeable about STP  
37 activities?  
38

39  
40 A. 27 HL&P kept itself properly knowledgeable about  
41 all aspects of STP activities by being an integral part of  
42 the Project organization. The vast amount of correspondence,  
43 meeting minutes, and other Project documentation is evidence  
44 of this; they indicate daily involvement in the Project in  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 all its aspects. Outside of QA, HL&P personnel are in  
4 residence in B&R engineering offices viewing on a day-to-day  
5 basis the engineering work being performed. Since November,  
6 1978 more than 90 HL&P employees have been located with our  
7 Project team in our Houston offices. They participate in  
8 our meetings and our day-to-day Project activities. They  
9 review, comment, approve, and make suggestions about those  
10 activities. In the construction area, more than 30 HL&P  
11 construction personnel are in residence at the site. They  
12 participate in meetings on a daily basis at various levels  
13 of management and supervision. They are fully aware of the  
14 status of the work. They participate in the planning and  
15 decision making process for the construction of the Project.  
16 In the QA area, as I have stated earlier, HL&P is directly  
17 involved through daily personal conversations, meetings at  
18 various levels, continuing surveillance activities, auditing  
19 activities, attendance at audit entrance and exit critiques,  
20 and Project QA meetings between B&R and HL&P. There is a  
21 variety of written correspondence that documents these many  
22 activities. HL&P has at least 41 QA personnel at the site.

23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40 Q. 28 When individual physical disputes or other  
41 serious site-level employee problems occurred among workers  
42 at the Project, was it usual for B&R Management to be aware  
43 of such instances and to monitor and participate in the  
44 resolution of these matters?  
45  
46  
47  
48  
49  
50  
51

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

A. 28 (KMB): Serious disputes among workers that rise to the level of physical abuse have been rare on the Project, and Management has made it clear that such behavior will not be tolerated. However, there have been isolated instances of disputes as discussed in detail in testimony by Messrs. Warnick, Singleton and Wilson. These have been known by both Houston and site QA Management, which have closely monitored or participated in the resolution of such matters. This has also been the case with isolated record falsifications, such as the PTL incident discussed by Mr. McKay in his testimony, where Management has been involved to assure that the responsible individual was immediately terminated and that the proper followup safety reviews were conducted. B&R management will not hesitate to take prompt responsive action, including termination of employment where appropriate, against employees who management finds have acted unprofessionally or dishonestly in the performance of their job responsibilities. The termination of Mr. Swayze in 1978 is another example of a sensitive issue which was closely monitored by QA Management at the site and in Houston, and other Executive B&R Management in Houston, to assure a fair and proper resolution of the matter.

In the case of the altercation between James Marshall and Joe Bazea that took place on June 30, 1977, which is described in Messrs. Singleton and Wilson's testimony, Site

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

QA Management was fully aware of, and involved in, the resolution of the matter, and Houston QA Management was kept fully informed, from the time of the incident to final resolution. This was considered to be a regrettable but isolated incident that was properly handled by Site Management. Similarly, in the case of the physical exchange between Jerry Lacey and Gary May on March 7, 1979, swift action was taken by site QA and Construction Management, and senior Houston QA Management closely followed the matter to assure that appropriate steps were taken at the site to react to the physical exchange.

When an allegation was made against Mr. Swayze in 1978 that he had solicited a bribe from a Construction Foreman, this allegation was treated with the utmost seriousness by site and Houston Management. A comprehensive investigation was undertaken, including interviews with employees who worked closely with the individuals involved. Senior officers, including the B&R Power Group Vice President, the Power Group Senior Construction Manager, the Power Group QA Manager, and a representative from the B&R General Counsel's Office, were directly involved in investigating the bribe allegation, in light of the seriousness and sensitivity of the charge. It was this Senior level management group that decided to terminate Mr. Swayze after reviewing employee statements and in consideration of Mr. Swayze's refusal to fully cooperate

1  
2 in the investigation or to give a sworn statement in response  
3 to the charge.  
4

5  
6 Q. 29 Was there concern within B&R management about  
7 allegations from Mr. Dan Swayze, that QC inspectors were  
8 being subjected to intimidation and harassment by Construction  
9 personnel and were not performing their required inspections?  
10 What was done to investigate the situation? What were the  
11 results and findings of these investigations?  
12

13  
14 A. 29 (KMB): It was not until March 1979 that B&R  
15 Management first became aware of allegations by Mr. Swayze  
16 that certain Civil QC Inspectors were involved in continuous  
17 card games and failed to perform required inspections in  
18 1977. Statements to this effect were first made in a deposi-  
19 tion of Mr. Swayze taken on March 2, 1979, in conjunction  
20 with a lawsuit initiated by Mr. Swayze against B&R. The  
21 lawsuit, which related to Mr. Swayze's termination from B&R  
22 on August 27, 1978, was dismissed with prejudice when Mr.  
23 Swayze refused to sign his deposition. Allegations about  
24 the card games also were made in interviews with Mr. Swayze  
25 which appeared on national television in October, 1979 and  
26 then again in May, 1980. Finally, Mr. Swayze made statements  
27 about the alleged card games in his deposition in this  
28 proceeding taken on June 19, 1980.  
29

30  
31 There are numerous inconsistencies in those various  
32 statements by Mr. Swayze with respect to the time frame in  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 which these card games were alleged to have occurred, the  
4 identities of the alleged card players, the underlying  
5 reasons for the card games, the percentage of time spent  
6 each day playing cards, and the amount of inspection performed  
7 by the alleged card players.  
8  
9

10  
11  
12 Nonetheless, B&R and the NRC investigated Mr. Swayze's  
13 allegations regarding card games and non-inspections. After  
14 Mr. Swayze's first allegation in March 1979, B&R QA Management  
15 interviewed the QC Inspectors who had been named by Mr.  
16 Swayze. Although the Inspectors did play cards during their  
17 lunch hour and in other periods of low construction activity  
18 during late 1976 and early 1977, none of the Inspectors had  
19 any knowledge of the extensive card games alleged to have  
20 occurred in 1977. Furthermore, none of the Inspectors were  
21 aware of any case in which QC Inspectors failed to properly  
22 inspect safety-related civil activities or in which QC  
23 Inspectors signed inspection records only when requested to  
24 do so by Construction. Our findings were confirmed by the  
25 NRC in Inspection Report 79-14, dated October 16, 1979.  
26  
27

28  
29  
30 After Mr. Swayze made sweeping allegations in October  
31 1979 about widespread card playing and non-inspections by  
32 Inspectors throughout 1977, B&R Senior Management directed  
33 Mr. Warnick to review all civil inspection records for 1977  
34 as a further means of investigating Mr. Swayze's allegations.  
35  
36 This review demonstrated that civil nonconformance reporting  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

in 1977 correlated well with the level of civil construction activities during the year. Of the 55 civil safety-related deficiency reports issued in 1977, 38 reports were issued by individuals alleged by Mr. Swayze to be card players, including 3 deficiency reports by Mr. Swayze himself. It is noteworthy that during most of 1977, Mr. Swayze was a Lead QC Inspector. Lead Inspectors would not normally be expected to sign inspection records.

Part of Mr. Swayze's allegations suggested that QC Inspectors were experiencing excessive pressure from Construction personnel which amounted to harassment or intimidation of the QC Inspectors. Prior to the NRC special investigation beginning in November 1979, B&R Management was aware of occasional incidents involving confrontations between Construction and QC personnel. Each of these isolated incidents were fully investigated by B&R Site and/or Houston Management, as indicated above. Although such occurrences were taken seriously and were fully discussed with HL&P Project management, they did not reflect a generic problem of intimidation and harassment of QC Inspectors by Construction personnel.

Q. 30 How and when did B&R become aware of the findings of the NRC's special investigation performed in late 1979? What actions were taken by B&R Management to respond to this information? How was this coordinated with HL&P?



1  
2  
3 A. 30 (KMB): During the last week of December 1979  
4 Mr. George Oprea, Executive Vice President of HL&P, met with  
5 several representatives from B&R and other personnel from  
6 HL&P to discuss information that had been related to Mr. Oprea  
7 by the NRC Region (V). It was during this meeting that I  
8 first became aware of the types of findings which we could  
9 expect in the NRC's investigation report. Beginning with  
10 this meeting, we were kept informed by HL&P of various  
11 concerns or findings identified by the NRC to them in meetings  
12 or discussions of their investigation. B&R and HL&P jointly  
13 assembled a team of Project personnel to immediately begin  
14 defining the responsive actions necessary and to develop  
15 plans for implementing corrective actions for any and all  
16 findings as we were informed of them. This Task Force  
17 effort continued through the issuance of the NRC's report  
18 and the Show Cause Order and the preparation of HL&P's  
19 formal response in July 1980. Some of its activities continue  
20 even today.

21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36 That is, we, jointly with HL&P, assembled a team and  
37 made assignments to responsible individuals to respond to  
38 various items as they were identified. Throughout this  
39 entire process, management of both HL&P and B&R were kept  
40 informed on a frequent basis through formal meetings which  
41 were held to discuss the status of the various items as well  
42 as informal discussions, memoranda, etc. The response to  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2 the various items was a joint effort, as has been our practice  
3 through the entire history of the Project, whereby if an  
4 item required actions by only B&R, we would develop the  
5 proposed corrective action and submit that to HL&P for its  
6 review and comment and possible modification to reflect  
7 their views. If the item only required HL&P's action, in  
8 most cases, B&R would be asked to review and comment on  
9 their response; and, of course, any items requiring joint  
10 efforts or joint actions would be approached and resolved in  
11 a joint fashion.  
12  
13  
14  
15  
16  
17  
18  
19  
20

21 Q. 31 What was the reaction of top management at B&R  
22 to the NRC's enforcement action taken in April 1980?  
23

24 A. 31 (KMB): To say the least, we were surprised.  
25 While we recognized that enforcement action is designed to  
26 spotlight deficiencies, we were dismayed because the Show  
27 Cause Order failed to place the STP program in a complete  
28 perspective. For example, while the NRC's Order conceded  
29 that no items of major safety significance were found, the  
30 Order did not mention (1) significant evidence of HL&P and  
31 B&R management awareness of the key problem areas; (2)  
32 significant corrective action which had already been initiated;  
33 (3) the extent to which Project problems had, in fact, been  
34 identified by the Project QA program; and (4) the overall  
35 quality of construction of the Project.  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 Q.32 Dr. Broom, more specifically, what actions were  
4 taken by B&R to investigate the NRC finding regarding alleged  
5 intimidation and harassment of B&R QC Inspectors by Construc-  
6 tion personnel?  
7  
8  
9

10 A.32 (KMB): This finding from the NRC special investiga-  
11 tion was first identified to me by Mr. Oprea in a meeting in  
12 late December 1979. I was extremely concerned about the NRC  
13 finding of undue pressure on QC Inspection personnel as was  
14 the entire B&R and HL&P management team. We took the matter  
15 very seriously. I immediately undertook an investigation to  
16 determine whether we had a "harassment and intimidation"  
17 problem as suggested by the NRC's findings, and if we did  
18 have such a problem - to determine the causes and to implement  
19 the proper corrective action.  
20  
21  
22  
23  
24  
25  
26  
27

28 Based on the information verbally obtained from  
29 the NRC (written NRC findings were not available until April  
30 1980), I personally directed members of my staff and an  
31 outside consultant to conduct extensive interviews with  
32 Construction and QC personnel to determine whether there was  
33 a perception of harassment or intimidation of QC personnel  
34 by Construction. In addition, Construction and QC personnel  
35 responded on a confidential basis to a written survey ques-  
36 tionnaire regarding employee attitudes and relationships.  
37  
38  
39  
40  
41  
42  
43  
44

45 The findings of this investigation, which was  
46 concluded in January 1980, indicated to me that there was  
47  
48  
49  
50  
51

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

not a perception on the part of QC Inspectors that they were being inhibited from performing their work due to intimidation or harassment by Construction. My investigation, however, confirmed that we had a morale problem among our QC personnel. This problem involved the normal types of complaints from employees about pay and benefits as well as a concern about management support which indicated to me that our supervisory people within the QA/QC organization were not providing feedback in the way of explanations of the resolution of matters which inspectors had identified as nonconformances. Although a deficiency identified by an Inspector would be resolved by Engineering or by rework, in many cases, the Inspector who identified the item was not kept fully informed of how the matter was resolved. While, in theory, that may be an acceptable way of operating; in fact, it does not work well because the Inspector can lose confidence in his management, can lose sight of the consequences of his inspection, and could become concerned that matters were not being resolved satisfactorily.

These kinds of complaints by QC Inspectors were not new to me. We had heard similar concerns expressed by individual Inspectors from time to time, as Messrs. Warnick and Singleton explain in their testimony. Furthermore, Management had taken steps prior to January 1980 to address these kinds of concerns. Examples are given in Answer 22

1  
2  
3 above. Nonetheless, my investigation in January 1980 con-  
4 firmed that additional Management attention to QC morale  
5 problems was necessary.  
6  
7

8 Q.33 What steps were taken by B&R Management beginning  
9 in January 1980 to address QC Inspectors morale problems and  
10 to improve communications between QC and Construction?  
11

12 A.33 (KMB): Even before my investigation was concluded,  
13 we held a meeting at the jobsite on January 4, 1980, with  
14 all QA/QC personnel, together with Construction Supervision.  
15 This was held as part of the "9 Point Action Plan" submitted  
16 by HL&P to the NRC in late December 1979, as described in  
17 Mr. Frazar's testimony in this proceeding.  
18  
19  
20  
21  
22  
23

24 At this meeting, Project management and QA/QC  
25 management addressed the subject of resolution of differences  
26 of opinion between inspection personnel and Construction  
27 personnel and other matters. The intent of this presentation  
28 was to emphasize to everyone that we would not tolerate  
29 unprofessional behavior by Construction or QC personnel,  
30 that they each had important roles to play and that there  
31 were management teams that were expected to resolve matters  
32 that might be in dispute. Unfortunately, this presentation  
33 became the subject of concern to NRC personnel who felt that  
34 cost and schedule were overemphasized to our QA/QC inspection  
35 personnel. I reviewed that brochure before it was presented  
36 to the Project personnel, and I did not read that concern  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2 into the presentation. My investigation subsequently showed  
3 that our Inspectors did not feel cost and schedule were  
4 overemphasized. However, our reaction was that if the NRC  
5 perceived it in that way, then our personnel might have  
6 perceived it in the same fashion. In any event, pursuant to  
7 the Show Cause Order, we retracted that presentation and  
8 held another presentation at which we made abundantly clear  
9 that QA/QC personnel are expected to perform their function  
10 free from concerns about cost and schedule. This subsequent  
11 presentation at the Site was made by W. M. Rice who heads  
12 the Power Group.  
13  
14  
15  
16  
17  
18  
19  
20  
21

22 A number of other steps were taken by B&R Management  
23 beginning in January 1980 to address concerns in this area.  
24 Examples of the actions taken are:  
25  
26

27  
28 -- I held a meeting in January 1980 at which the QA  
29 Manager and I impressed upon our QC Supervisors  
30 the need for attention to human relations and to  
31 personal discussion between supervisors and inspec-  
32 tion personnel to ensure that full feedback in  
33 this regard was occurring. We instructed all QC  
34 Supervisors to hold meetings with their Inspectors  
35 at least weekly.  
36  
37  
38  
39  
40  
41  
42

43 -- A complete reevaluation of the B&R salary adminis-  
44 tration program for QA/QC personnel was conducted  
45 under my direction during January-February 1980,  
46  
47  
48  
49  
50  
51

1  
2  
3 and a revised QC salary administration program was  
4 implemented on March 30, 1980. Care was taken to  
5 ensure fair and equitable compensation for QA/QC  
6 personnel.  
7  
8

10 -- The B&R Project QA/QC organization was reevaluated  
11 during January-February 1980, and in March 1980,  
12 revisions to the organization were implemented  
13 including an upgraded reclassification of QC  
14 supervisory personnel to provide equal stature  
15 with their Construction counterparts.  
16  
17

18 -- B&R Project management has issued a procedure,  
19 STP-PGM-02, "Procedure for Resolving Disputes  
20 Between Construction and QA/QC Personnel," rev. 0,  
21 January 7, 1980, which clearly defines a step by  
22 step process whereby any differences of opinion  
23 between Construction and QC personnel are resolved  
24 through the use of successive levels of super-  
25 vision in order to eliminate confrontations which  
26 could result in harassment or intimidation. The  
27 procedure has been discussed in indoctrination  
28 sessions for Construction supervision and QA/QC  
29 personnel.  
30  
31

32 -- In January 1980, the position of B&R Assistant QA  
33 Department Manager was abolished, thereby shortening  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 the communication chain between site QC personnel  
4 and top QA management to facilitate communication  
5 and resolution of problems.  
6  
7  
8

9  
10 -- On February 15-16 and February 22-23, 1980, a  
11 formal training seminar on employee motivation,  
12 human relations, and supervisory skills was held  
13 for Construction and QA/QC supervision. This  
14 program was conducted by professors in organiza-  
15 tional behavior management from the University of  
16 Houston.  
17

18  
19  
20  
21 -- During March 1980, a meeting was held for B&R  
22 QA/QC personnel in which B&R Power Group Management  
23 and QA Department Management discussed the B&R  
24 open-door policy for all employees to express  
25 concerns as to any aspect of the STP operation or  
26 his personal treatment as an employee. Dedication  
27 to achieving quality objectives was emphasized.  
28

29  
30  
31 -- In March 1980, "QA Bulletins" were instituted  
32 throughout the QA/QC department, including all  
33 site B&R QA/QC personnel, to provide better under-  
34 standing of overall activities, capabilities and  
35 support within the department. The objective was  
36 to improve individual understanding of the inter-  
37 dependence of personnel in all Project quality  
38 related activities.  
39  
40  
41  
42  
43  
44  
45  
46  
47

48  
49  
50  
51



- 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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51
- On March 27, 1980, the B&R Project General Manager issued a statement reiterating the mandate that Project procedures, specifications and drawings be rigorously followed.
  - A program of regular refresher training of B&R Construction and QA/QC personnel in Project procedures has been instituted to ensure better understanding of procedures governing their work.
  - A complete review of B&R QA/QC personnel qualifications and recertification of those personnel, where necessary, was completed during January-April 1980, to eliminate any doubt as to whether QA/QC personnel are properly qualified.
  - Extra radios have been provided to B&R QA/QC personnel and HL&P Site Surveillance personnel to improve radio communication about field activities. These radios increase communication within B&R and between HL&P and B&R Construction and QA/QC personnel.
  - On May 8-9, 1980, B&R QA management conducted meetings with site QC Supervisors to review NRC Report Number 79-19. B&R QA management will continue to provide additional perspective on problems, the need for better communications and proper support of inspection personnel.

1  
2  
3 -- In May 1980, a supervisory skills course was  
4 initiated for first-line QA/QC supervision. A  
5 course was obtained from Practical Management  
6 Associates and encompasses necessary supervisory  
7 skills, and diagnosis of causes of personnel  
8 problems.  
9

10 In addition to these specific responsive actions, B&R  
11 management has accomplished other basic QA program improve-  
12 ments in 1980 and this year, which are discussed in Mr.  
13 Vurpillat's testimony.  
14

15 Q.34 Are there indications that QC Inspector morale  
16 has improved as a result of management actions taken by B&R  
17 since January 1980?  
18

19 A.34 (KMB): Yes. As Mr. Vurpillat indicates in his  
20 testimony, B&R and its consultant have found that our efforts  
21 have substantially reduced the previous QA/QC management  
22 concerns expressed by some of the Inspectors. While we are  
23 of course encouraged by the apparent attitude improvements,  
24 we understand the importance of fully and effectively imple-  
25 menting our program and staying alert for any signs of  
26 morale problems, and we will do so.  
27

28 Q. 35 Mr. Vurpillat, describe the major changes in  
29 B&R's QA program since the Show Cause Order.  
30

31 A. 35 (RJV): As reflected in HL&P's response to the  
32 Show Cause Order, improvements to the QA program for STP  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 were identified in a number of major areas. Among the  
4 significant changes made in the B&R QA program implementation  
5 are the following:  
6  
7  
8

- 10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51
1. Procedures have been clarified and simplified down to the job level. In this area, B&R has recognized the need for improved STP procedures to facilitate ease of compliance and to ensure consistency. Significant rewriting of procedures was begun in 1979 and has been accelerated since.

Procedural revisions have been implemented to incorporate applicable criteria in the text of the procedure rather than incorporating them by reference. In addition, construction procedures are being revised to include more specifics. These revisions are intended to remove the need for subjective interpretations by field personnel, and will simplify and make more consistent both field constructions and QC inspections. Third, construction QA Procedures currently are being improved so that the subject areas contained in each of the 10 CFR Part 50, Appendix B Criteria will be drawn together in a single QAP or a series of QAP's. For ease of identification, the procedure numbers will correspond to appropriate criteria numbers.

1  
2  
3  
4  
5  
6  
7  
8  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
4  
48  
49  
50  
51

Finally, B&R has developed a more efficient process for making these procedural changes by requiring responsible STP personnel to obtain input from all organizations whose activities will be affected by the new or revised procedures. For example, a QAP addressing the manner in which nonconformances are to be resolved must be reviewed by B&R Construction, Engineering, Materials Management and Project Management personnel to ensure consistency within each organization's program. In addition, all of these new or revised program procedures are submitted to HL&P for review and comments before final implementation.

2. An improved system for documenting and resolving non-conforming conditions has been developed. Detailed trend analysis and data analysis procedures have been developed and implemented in an attempt to better provide for early detection and resolution of potential weaknesses and recurring problems.
3. Training and indoctrination has been upgraded for personnel at all levels. This training and indoctrination relates to quality related tasks with special emphasis on the project goals of reliability and safety, quality first, and "do it right the first time."

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

B&R has retained the Quality College consulting firm headed by Philip Crosby, a noted QA consultant. Under Mr. Crosby's guidance, a formalized Quality Improvement Program has been established and seminars on elements of a good QA program have been attended by over 100 B&R Project Management and QA/QC management personnel, as well as by senior management personnel from both B&R and HL&P. This Quality Improvement Program is a long-term endeavor, and ultimately will cover all aspects of the QA Program at STP, including Purchasing, Engineering, Construction, and QA/QC.

4. Stronger system controls have been initiated and are reflected in procedures which assure that, quality-related activities are initiated, controlled, and properly documented. B&R has developed an Inspection Planning Program to formalize the existing inspection plans contained in the construction procedures. This program will ensure that the quality-related activities are adequately planned, performed as required, reviewed, evaluated, documented and verified--all in the proper sequence.
5. The system of audits on the Project has been improved to better verify adherence to procedures and to identify deficiencies for resolution at the appropriate level of management.

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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

B&R and HL&P regularly perform audits which ensure that the QA Program commitments for STP continue to be implemented in conformance with all applicable requirements. First, B&R conducts audits of its QA Program activities at least annually, and more often if necessary. Similar audits of B&R's QA Program are performed at least annually by HL&P, and where appropriate, B&R and HL&P may perform joint audits. Audit Reports are distributed to B&R and HL&P management as well as to the management of the audited organization, and corrective action is taken where appropriate.

In addition to these B&R and HL&P audits, the QAMRB directs an annual review of the B&R Power Group Program, including STP. This comprehensive review is performed with the assistance of outside consultants. Reports are reviewed and discussed by all QAMRB members. If unresolved items are identified in the reports, the QAMRB, where it deems appropriate, assigns particular organizations within B&R to close out these items. Written reports from these organizations which document the corrective action taken for closeout are then presented to and reviewed by the QAMRB.

1  
2  
3 6. Visibility of and active participation by upper  
4 management in QA/QC activities have been increased.  
5 Since September 1980, B&R's long-established  
6 QAMRB, composed of B&R Power Group senior manage-  
7 ment executives, has held monthly meetings at the  
8 STP site which HL&P management personnel have  
9 attended. The Board's activities have been dis-  
10 cussed in prior testimony. In addition to these  
11 QAMRB meetings, there have long been separate  
12 monthly Project review meetings held jointly by  
13 B&R and HL&P. At these meetings, attended by  
14 officers of the B&R Power Group and senior HL&P  
15 Project management personnel, general Project QA  
16 issues are discussed.  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27

28  
29 On a weekly basis there are QA action item  
30 meetings, attended by the B&R Project QA Manager,  
31 the HL&P Project QA Manager and others, if necessary.  
32 Discussions at these meetings focus on unresolved  
33 problems identified through HL&P site surveillance  
34 activities. B&R personnel develop and implement  
35 corrective actions which must be reviewed and  
36 approved by HL&P before final closeout of the  
37 problems. In addition, the HL&P Project QA Super-  
38 visor and the B&R Project QA Manager meet at least  
39 weekly to discuss QA related activities. Finally,  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 HL&P QA personnel in each discipline observe B&R  
4 QC Inspectors and Lead Inspectors on a daily  
5 basis.  
6  
7

8  
9  
10 In addition, since September 1980, I have  
11 reported each month to the B&R Operating Committee  
12 regarding the status of the QA/QC Program for the  
13 STP.  
14

15  
16 In addition to the above, changes in key personnel and  
17 reassignments have been made. B&R has accelerated earlier  
18 initiatives to strengthen and reorganize its QA management  
19 team at STP. B&R has made these personnel and organiza-  
20 tional changes by recruiting highly qualified, experienced  
21 personnel from the outside, reassigning home office personnel  
22 from the B&R Power Group QA staff to the STP team, relocating  
23 supervisory personnel from Houston to the STP site to facili-  
24 tate prompt decisions and problem resolutions, and reorganiz-  
25 ing the QA management staff to increase direct involvement  
26 by middle and upper level management in the STP QA process.  
27  
28 In my judgment the procedural changes and the increased  
29 management attention are both very important. But most  
30 important of all has been the significant qualitative improve-  
31 ment in the personnel assigned to manage and carry out the  
32 QA function. We now have an outstanding team of qualified  
33 and dedicated supervisory QA personnel.  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51



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  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

In about December 1979, the Project QA Manager moved onto the STP site full-time to facilitate and speed responses to problems. He also began reporting directly to the B&R Power Group QA Manager, instead of reporting through the Assistant Manager, to facilitate prompt action by higher levels of QA management. Because of these changes, QA Management for STP is now centered at the site where it can exercise direct control over daily STP activities. In addition, lines of communication have been shortened between STP QA Management and B&R Power Group QA Management.

In mid-summer 1980, W. J. Friedrich, a QA consultant, was temporarily assigned to STP as B&R Project QA Manager. Mr. Friedrich's prior experience includes eight years as a site QA Manager at various nuclear plants and twelve years of additional QA experience in the aerospace industry.

I was then hired in August 1980 as Power Group QA Manager to provide permanent Power Group QA management and supervision. I replaced Dr. Knox Broom, Senior Vice President of the B&R Power Group, who had filled the position on an interim basis.

In addition to changes in QA Management, changes were also taking place in the Quality Engineering area. Until about October 1979, the B&R Houston Power Group QE staff had been spending about 50% of their time on STP and the rest of their time on various other Power Group QA projects. In

1  
2  
3 October 1979, the B&R Power Group QE staff in Houston began  
4 devoting virtually full time to QE activities to STP.  
5  
6

7 In late December 1979, Mr. Gordon Purdy was transferred  
8 by B&R from Houston to the STP site to assist the Project QA  
9 Manager, and in May 1980, the function began reporting  
10 directly to the Project QA Manager instead of to the Power  
11 Group QA Manager. In January 1980, Mr. Purdy moved six  
12 Quality Engineers from the Houston Power Group QE team to  
13 the site, to supplement the existing QE staff and to speed  
14 the QE decision-making process. Since that time, the QE  
15 staff at the STP site has been augmented in all disciplines  
16 with additional qualified personnel.  
17  
18  
19  
20  
21  
22  
23  
24

25 In May 1980, Mr. Don Harris, a QA consultant, was  
26 assigned to work with Mr. Purdy in supervising all QE activi-  
27 ties at STP. Mr. Harris' prior experience includes nine  
28 years in the nuclear industry as a QE supervisor and QA  
29 manager, and fourteen years as a quality engineer in the  
30 aerospace industry.  
31  
32  
33  
34  
35

36 Moreover, the interface between B&R and HL&P has been  
37 strengthened. Beginning with the HL&P's review and approval  
38 of B&R's initial QA Program for STP, HL&P has maintained  
39 control over the Program, and in so doing has continually  
40 interacted with B&R at all levels of management. HL&P  
41 reviews and comments on all procedural changes before imple-  
42 mentation. HL&P also performs a continual surveillance of  
43  
44  
45  
46  
47  
48  
49  
50  
51

1  
2  
3 all B&R QA Program activities, including activities at the  
4 STP site, in Houston, and vendor surveillance shop inspections.  
5 B&R QA Project documents such as vendor surveillance reports,  
6 nonconformance reports and audit reports routinely are  
7 presented to HL&P for review and appropriate action. In  
8 addition, HL&P not only participates jointly with B&R in  
9 certain QA audits, but conducts its own independent audits  
10 of B&R QA activities. Audits performed by B&R Audit Group  
11 are discussed in exit critiques which HL&P personnel often  
12 attend.  
13  
14  
15  
16  
17  
18  
19  
20

21 In sum, the interface between the two companies concern-  
22 ing B&R's QA Program has always been and continues to be  
23 extensive.  
24  
25  
26

27 Q. 36 Are there indications that these program changes  
28 have in fact remedied problems identified in the Show Cause  
29 Order?  
30

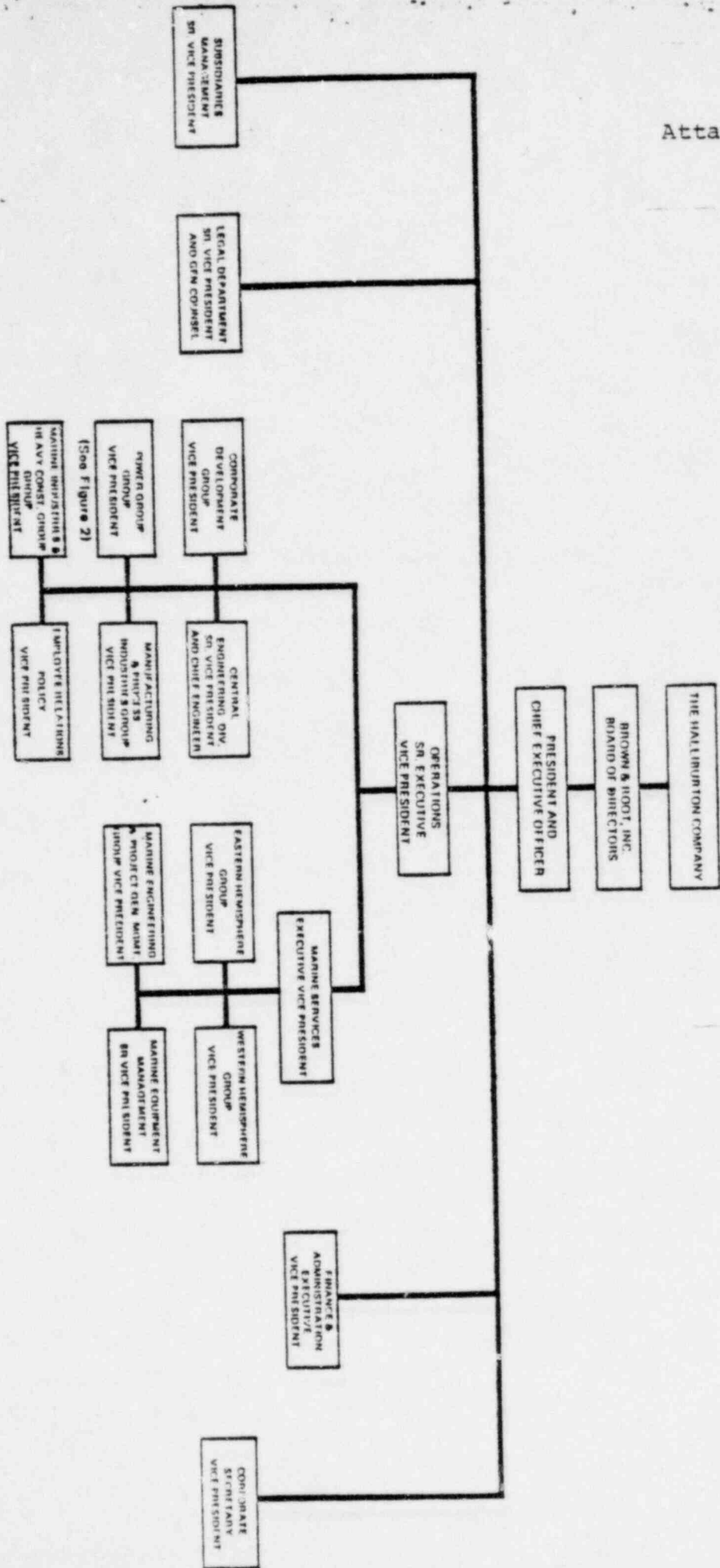
31 A. 36 (RJV): Yes. First of all, programmatic changes  
32 have been made in the areas of soils, concrete and welding,  
33 and after a complete review by the NRC, restart of the  
34 activities that had been stopped has occurred and they are  
35 being carried out well. Second, as a result of the salary,  
36 personnel and organizational changes made by B&R, there has  
37 been a marked improvement in the overall morale of personnel  
38 at the STP site. The same conclusion has been communicated  
39 to us by the NRC at the August 19, 1980 public meeting.  
40 This conclusion has also been reaffirmed on two separate  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51

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  
26  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
47  
48  
49  
50  
51

follow-up evaluations by our consultant. Employees are asking questions of their supervisors more frequently, supervisors and management personnel are taking more time to explain decisions to QC Inspectors, and disagreements between Construction and QA/QC personnel are being resolved more expeditiously.

Finally, under the newly revised and integrated quality construction procedures, construction and inspection activities conducted in the areas of welding and concrete have proved to be easier to understand and to perform.

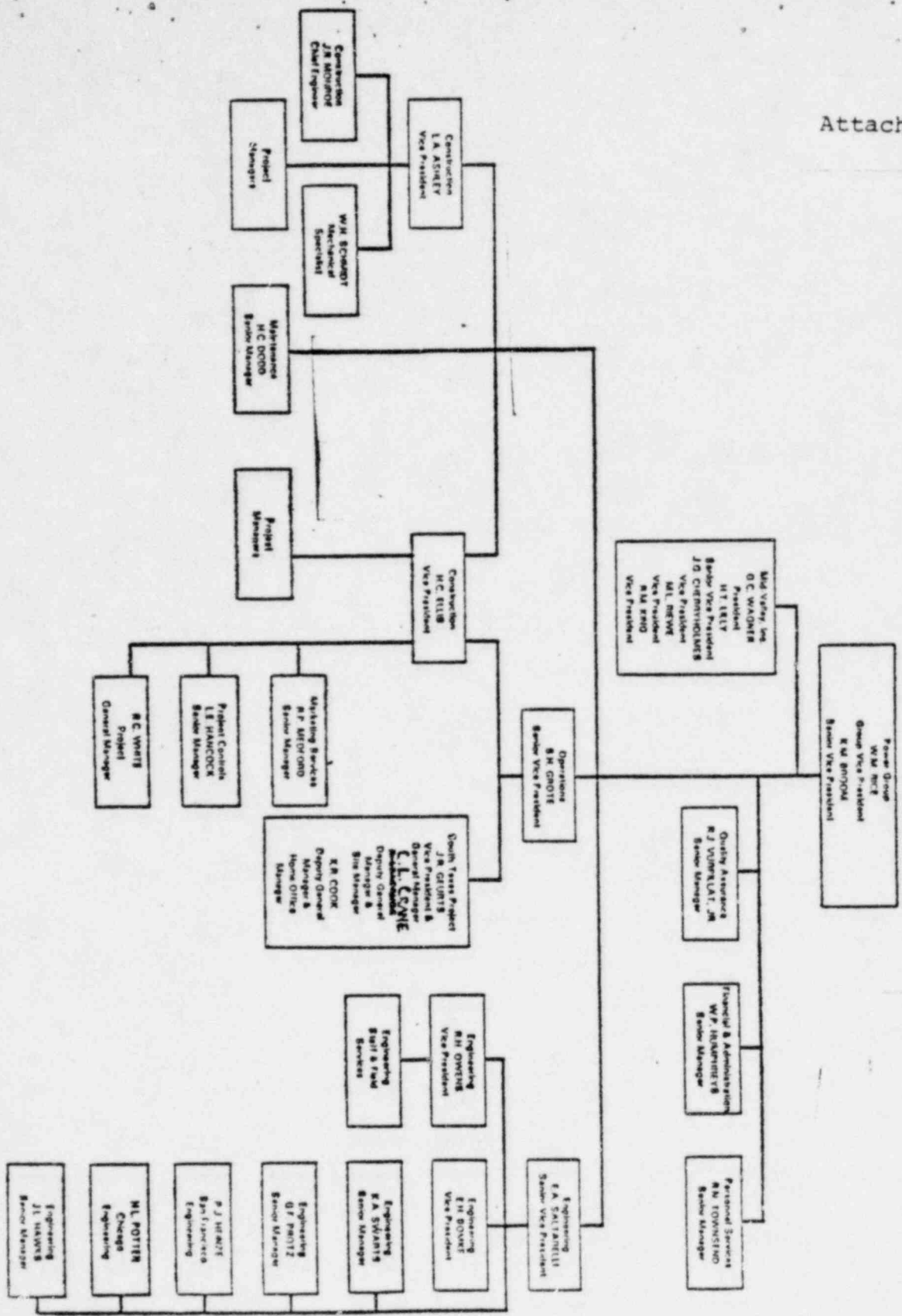
THUD:10:D



BROWN & ROOT

CORPORATE ORGANIZATION

BROWN & ROOT  
POWER GROUP ORGANIZATION



-11

1 MR. AXELRAD: Before cross-examination begins,  
2 Mr. Chairman, we had indicated that Dr. Broom and Mr. Vurpillat  
3 would be available to testify with respect to the NRC  
4 I&E Investigation Report 81-11, and for purposes of that  
5 examination, I would like to have identified Applicant's  
6 Exhibit No. 32.

7 I am providing copies to the reporter.

8 (Applicant's Exhibit No. 32  
9 was marked for identification.)

10 MR. AXELRAD: This is a letter dated June  
11 1, 1981, from Mr. Oprea to Mr. Karl Seyfrit, which I will  
12 describe and which was served on the parties and the members  
13 of the Board on June 1.

14 I do have extra copies here, if anyone needs  
15 an extra one.

16 JUDGE BECHHOEFER: I just wanted to know what  
17 document it was.

18 MR. AXELRAD: The document which I will ask to be  
19 marked for identification as Applicant's Exhibit No. 32  
20 consists of a two-page letter from G. W. Oprea, Jr., of  
21 Houston Lighting & Power Company, dated June 1, 1981,  
22 to Mr. Karl V. Seyfrit of U.S. Nuclear Regulatory Commission,  
23 plus a one-page listing of people who received such letter,  
24 plus an attachment consisting of a letter dated May 20,  
25 1981, from K. M. Broom, Senior Vice President of Brown &

-12

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

1 Root, to Mr. J. H. Goldberg, Vice President of Houston Lighting  
 2 & Power Company, to which there is attached a seven-page  
 3 memorandum dated May 20, 1981, from S. H. Grote to  
 4 Dr. Knox M. Broom, on the subject of, "NRC Investigation  
 5 81-11: Allegations of Obstruction of an NRC Investigation  
 6 and Intimidation of Employees; and a Brown & Root, Inc.,  
 7 office memo from W. M. Rice to Distribution, dated May  
 8 7, 1981, plus a "Notice to All STP Employees" from  
 9 W. M. Rice, also dated May 7, 1981.

10 That completes the description of the Applicant's  
 11 proposed Exhibit No. 32, which we ask to be marked for  
 12 identification.

13 JUDGE BECHHOEFER: It will be so marked.

14 . . .  
 15 - - -  
 16  
 17  
 18  
 19  
 20  
 21  
 22  
 23  
 24  
 25



## DIRECT EXAMINATION (Continued)

BY MR. AXELRAD:

Q Dr. Broom, do you have before you a copy of the document which has just been marked for identification as Applicant's Exhibit No. 32?

BY WITNESS BROOM:

A Yes, I do.

Q One of the attachments within such exhibit is a letter dated May 20, 1981, from K. M. Broom to Mr. Goldberg, plus attachments thereto, including a memorandum dated May 20, 1981.

Do you have that before you?

BY WITNESS BROOM:

A Yes, I do.

Q Was the investigation conducted by Brown & Root, which is described in that memorandum dated May 20, 1981, conducted under your direction and supervision?

BY WITNESS BROOM:

A Yes, it was.

Q Does the memorandum of May 20, 1981, contain a true and correct description of the investigation?

BY WITNESS BROOM:

A Yes.

Q And is that memorandum true and correct, to the best of your knowledge and belief?

1 BY WITNESS BROOM:

2 A Yes, it is.

3 MR. AXELRAD: Mr. Chairman, Mr. Broom and  
4 Mr. Vurpillat are now available for cross-examination.

5 JUDGE BECHHOEFER: Are you moving that this  
6 be admitted at this point?

7 MR. AXELRAD: No. We move it to be admitted  
8 when the Oprea panel returns and when Mr. Oprea can do  
9 so.

10 JUDGE BECHHOEFER: Off the record for a moment.

11 (Discussion off the record.)

12 MR. AXELRAD: We're perfectly willing to have  
13 it entered into the record now.

14 JUDGE BECHHOEFER: Would there be any objection  
15 by Intervenors?

16 MR. JORDAN: I think we'd have to proceed  
17 with some voir dire on the witness, on Dr. Broom, if it  
18 were to be admitted under his sponsorship.

19 JUDGE BECHHOEFER: Okay.

20 MR. JORDAN: I think that's the way to proceed  
21 at this point.

22 JUDGE BECHHOEFER: Would you prefer to have  
23 it that way, or would you prefer to have it saved for  
24 when Mr. Oprea comes back?

25 MR. HAGER: Well, as far as the two-page

-15  
1 document, which is signed by Mr. Oprea; and, of course,  
2 the attached service list -- in other words, the first  
3 three pages of the document, they could wait for Mr. Oprea.

4 But the memorandum, which is from Mr. Grote  
5 to Mr. Broom, it would seem appropriate for the Applicants  
6 to move admission of this part of the document at this  
7 time so that any objections could be made while Mr. Broom  
8 is here to respond to them.

9 MR. AXELRAD: Why don't we take the portion  
10 beginning with the Knox M. Broom letter to Goldberg and  
11 all the attachments thereto, and call that Applicant's  
12 Exhibit 32(a), and have that admitted as 32(a).

13 JUDGE BECHHOEFER: I think that would be desirable.

14 (Applicant's Exhibit No. 32(a)  
15 was marked for identification.)

16 MR. AXELRAD: Applicants move at this time  
17 that the exhibit which has been marked for identification  
18 as Applicants' Exhibit 32(a) be admitted into evidence.

19 JUDGE BECHHOEFER: Is there any objection?

20 MR. REIS: May I ask what the purpose of admitting  
21 it is, to show that it was transmitted, or what? That  
22 the letter was transmitted?

23 MR. AXELRAD: Well, 32(a) is the letter, plus  
24 the attached memorandum --

25 MR. REIS: Right. That the letter and the

1 attachment was transmitted?

2 MR. AXELRAD: The purpose of having this in  
3 the record is because it consists, in essence, of the  
4 description of the investigation which was performed by  
5 Brown & Root, and is in essence the testimony of Dr. Broom  
6 on that subject.

7 If this was not in the record, then we would  
8 have to go through a series of questions and answers to  
9 elicit the same information.

10 MR. JORDAN: On that basis, which was the  
11 basis we expected, we require voir dire at this point  
12 on the document.

13 JUDGE BECHHOEFER: On Dr. Broom?

14 MR. JORDAN: On Dr. Broom, yes.

15 JUDGE BECHHOEFER: Why don't you proceed.

16 VOIR DIRE EXAMINATION

17 BY MR. JORDAN:

18 Q Dr. Broom, I believe you testified that this  
19 is a true and correct description of the investigation  
20 that was performed?

21 BY WITNESS BROOM:

22 A Yes, I did.

23 Q Who was it that performed the investigation?

24 BY WITNESS BROOM:

25 A Mr. S. H. Grote, Mr. Glenn Magnuson.

1 Q And these individuals, to summarize, essentially  
2 interviewed a number of people, and that was what their  
3 investigation involved?

4 BY WITNESS BROOM:

5 A Yes, that is correct in part.

6 They conducted a series of interviews.

7 Q And what else did they do, other than do interviews?

8 BY WITNESS BROOM:

9 A They verified the location of the equipment  
10 cases in question; they looked at the documents that were  
11 contained in one of the cases; and held discussions and  
12 interviews with a number of people.

13 Q They also had performed some polygraph tests?

14 BY WITNESS BROOM:

15 A Yes, they did. They directed that they were  
16 performed.

17 Q To your knowledge, were they present when  
18 the polygraph tests were performed?

19 BY WITNESS BROOM:

20 A I do not believe either Mr. Grote or Mr. Magnuson  
21 was present during the conduct of all of the polygraph  
22 examinations.

23 Q You were not present during any of the interviews  
24 or the polygraph examinations or the examination of the  
25 documents or the examination of the suitcase?

1 BY WITNESS BROOM:

2 A No, sir. I was attending these hearings.

3 Q Your information, then, comes strictly from  
4 Mr. Grote and, perhaps, also, from Mr. Magnuson?

5 BY WITNESS BROOM:

6 A The information that I had during the conduct  
7 of this investigation came from meetings with those two  
8 people and daily telephonic discussions with them during  
9 the course of the investigation, and this report, yes.

10 MR. JORDAN: Mr. Chairman, on that basis I  
11 would object to admitting this document for the purpose  
12 of the truth of this document, being particularly the  
13 Grote to Broom memo of May 20, 1981, for the purpose of  
14 the truth and veracity of the matters stated therein,  
15 at least to the extent that they reflect what has been  
16 said by or reported by Grote or Magnuson.

17 These are not within the direct knowledge  
18 of Dr. Broom. We have a case here where credibility of  
19 the people involved in these investigations, both the  
20 investigators and the investigated is a crucial issue  
21 here, and it is simply not acceptable to have that kind  
22 of information come before the Board on hearsay, and it  
23 appears (at least in some cases) to be more than simple  
24 hearsay, in the case of some of the polygraph tests, where  
25 not even the investigators were there at the time.

1           So for the purpose of truth and veracity this  
2 document cannot be admitted.

3           It can be admitted, presumably, for the purpose  
4 of showing that it was transmitted, but that really, it  
5 seems to me, pretty much eliminates it for any substantive  
6 consideration.

7           WITNESS BROOM: Mr. Jordan, may I add one  
8 comment that corrects, slightly, my response to your earlier  
9 question?

10           I was present for one interview with one of  
11 the individuals involved, who was brought to Houston.

12           Other than that, my previous answer is correct.

13           MR. JORDAN: Then I should think that that  
14 would not really change the situation with respect to  
15 the memorandum.

16           Presumably he could testify to the single  
17 interview where he was present; but the issues of credibility  
18 are simply too great here to allow a written report by  
19 somebody else who talked with somebody else to be admitted  
20 through a third party who wasn't there.

21  
22           - - -  
23  
24  
25

-1  
TP  
ed

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

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

(Board conference.)

MR. REIS: Mr. Chairman, may the Staff be heard before the ruling of the Board?

JUDGE BECHHOEFER: The Board has already conferred and we have discussed this question previously, and I would like to at least state what our feeling is.

If you have any objections, then....

The Board thinks that both Mr. Grote and Mr. Magnuson should join this panel for this purpose; and in addition, the Board has other questions that it wanted to ask Mr. Grote.

We know that the Intervenors had requested Mr. Grote for certain purposes.

The Board has some broader managerial type questions that it would like to ask Mr. Grote; but we think for the discussion of this report, Mr. Grote and Mr. Magnuson should be brought on.

Our inquiry would be when that could happen, so that cross-examination on this particular aspect could await that.

Could they be here tomorrow, for instance?

MR. AXELRAD: Mr. Chairman, I would have to inquire about that at a recess, but before we do that, I would like to know what the Staff was about to say on the subject.



1 JUDGE BECHHOEFER: Yes.

2 MR. REIS: The Staff's statements are, in  
3 essence, that admission of this document has to be determined  
4 under the exceptions to the hearsay rule set out in Rule  
5 803 of the Federal Rules of Evidence which the Commission  
6 uses as a guide.

7 We look at 803, and this is not in the nature  
8 of a Staff investigative report, a Government investigative  
9 report, which comes in under 803(8)(C), but comes in,  
10 if at all, under 803(6).

11 Now the questions here, in essence, and I  
12 do think that Mr. Grote is probably necessary to get to  
13 some of these matters and should be here, in any event;  
14 but the questions here involved are: Was this in the  
15 regularly conducted course of business? How does this  
16 relate to the regular activities of Brown & Root? And  
17 is it such a report that comes in as an exception under  
18 records of regularly conducted activity; or as an investigation,  
19 is it different?

20 And looking at the Rules of Evidence, we have  
21 to make that determination, and that's where our focus  
22 has to be.

23 Frankly, I don't think we've gotten to that  
24 point in voir dire or anything else.

25 I do think Mr. Grote, as the Board determined,

-3  
1 is necessary for an examination into matters into this;  
2 but I think that the basic determination, even when Mr.  
3 Grote is here, because the matter right now is third-  
4 hand hearsay, when Mr. Grote will be here it will be second-  
5 hand hearsay, and it very well may come in with Mr. Grote.

6 But the determination has to be made under  
7 803(6) of the Federal Rules of Evidence.

8 JUDGE BECHHOEFER: Mr. Reis, if Mr. Grote  
9 and Mr. Magnuson were here and they had prepared that  
10 document, they at least could testify as to how they prepared  
11 it and what process they went through.

12 MR. REIS: Right. Their perceptions as they  
13 prepared it, but as to the veracity of the statements  
14 they heard, I am not sure whether if they reported that  
15 X told them thus-and-so, the truth of X's statement, other  
16 than their perception of X's statement, would be established  
17 in the record.

18 It may very well be, and I'd like to think  
19 about it a little more, as to whether it comes in under  
20 803(6).

21 It may be -- and I think there has to be more  
22 voir dire, probably of Mr. Broom, as well as Mr. Grote,  
23 to see whether the record fits within the exceptions set  
24 out in (6) of the Federal Rules of Evidence.

25 MR. AXELRAD: Mr. Chairman, in order to save

1 time, why don't I suggest that we postpone further discussion  
2 of this matter until I've had a chance to discuss it with  
3 my client at the next recess.

4 Then if it develops that Mr. Grote and  
5 Mr. Magnuson would be available, then perhaps there will  
6 not be any need to get into any further legal consideration  
7 of the matter.

8 If we find that there is a need to pursue  
9 this matter further as a matter of law, then we can resume  
10 the argument after the next recess.

11 In the meantime, if Dr. Broom and Mr. Vurpillat  
12 can be cross-examined on their basic testimony, we can  
13 just proceed and not waste the time of the parties in  
14 any further discussion of the subject.

15 JUDGE BECHHOEFER: Is that satisfactory with  
16 the other parties?

17 MR. JORDAN: Yes, it is, Your Honor.

18 MR. HAGER: Yes, it is, Your Honor.

19 JUDGE BECHHOEFER: Well, we will proceed in  
20 that way.

21 CROSS-EXAMINATION

22 BY MR. JORDAN:

23 Q Dr. Broom and Mr. Vurpillat, welcome to the  
24 stand.

25 My name is Bill Jordan, as I'm sure you know

-5 1 by now.

2 I've seen you around the last weeks of this  
3 hearing, and I'm pleased as I go forward to be able to  
4 put names to faces.

5 Dr. Broom, I'd like to start with you, and  
6 begin by discussing what you discuss fairly early in your  
7 testimony, and that is essentially the structure of Brown  
8 & Root.

9 You have some attachments and so on that I'll  
10 get to on the subject.

11 I'd like to begin first with Brown & Root  
12 and the structure essentially above Brown & Root.

13 Who is it that owns Brown & Root, Inc.?

14 BY WITNESS BROOM:

15 A Halliburton, Incorporated.

16 Q Halliburton wholly owns Brown & Root?

17 BY WITNESS BROOM:

18 A Yes, that's correct.

19 Q Can you tell us, is Halliburton, Incorporated,  
20 a publicly-owned company?

21 BY WITNESS BROOM:

22 A Yes, it is. It's listed on the New York Stock  
23 Exchange.

24 Q Does Halliburton, Inc., own any other companies  
25 that perform similar functions to Brown & Root, Inc.,

1 to your knowledge?

2 BY WITNESS BROOM:

3 A. They own NUS Corporation, which is a similar  
4 company to Brown & Root, different in many respects, but  
5 they do serve the nuclear industry and they do perform  
6 engineering services.

7 They are not powerplant architect engineers,  
8 and they do not do construction.

9 They own -- No other subsidiaries of Halliburton,  
10 to my knowledge, are in the plant design and construction  
11 business.

12 There are subsidiaries of Brown & Root, and  
13 one of them I referred to as Mid-Valley, Incorporated,  
14 which is a Brown & Root subsidiary, which performs construction  
15 of plants, as does Brown & Root.

16 Q You mentioned NUS Corporation, and I'm afraid  
17 that confused me a little bit.

18 I believe that in your testimony, and I'm  
19 not sure where at this point, you mentioned Brown & Root  
20 having purchased an equity interest in NUS Corporation  
21 as part of its gathering steam to get involved in nuclear  
22 activities.

23 Is that accurate?

24 BY WITNESS BROOM:

25 A. Yes, I believe that's correct. A number of

-7  
1 years ago, a small equity position, and as I remember,  
2 it was 15 to 18 percent equity interest in NUS was purchased;  
3 and I believe at the time that was purchased by Brown  
4 & Root instead of Halliburton.

5 I stand to be corrected on that, but I believe  
6 that is the way our acquisition of NUS was started.

7 And then more recently, I believe about two  
8 to three years ago, the full acquisition of NUS was begun,  
9 and at that time it was acquired by Halliburton.

10 Now the stock transfer from Brown & Root to  
11 Halliburton took place, I'm not exactly sure, but I believe  
12 the ownership of NUS today is properly stated as a Halliburton  
13 subsidiary.

14 Q Can you identify for us who the people in  
15 Halliburton, Inc., somewhere above Brown & Root are who  
16 are responsible for the liaison, the contacts, with Brown  
17 & Root, particularly on nuclear matters?

18 BY WITNESS BROOM:

19 A Mr. Jack Harbin is the chief executive officer  
20 and chairman of the board of Halliburton.

21 Q I'm afraid I didn't quite hear his last name;  
22 what was that?

23 BY WITNESS BROOM:

24 A H-a-r-b-i-n, Harbin.

25 Mr. Ed Paramore, P-a-r-a-m-o-r-e, is the

1 president of Halliburton.

2 They are both members of our board of directors.  
3 They attend monthly meetings, if not more frequently,  
4 in our offices; and our Mr. Tom Feehan reports frequently  
5 to them on all of our activities, including the South  
6 Texas Project and nuclear matters.

7 Q Do you know whether Brown & Root is the largest  
8 subsidiary of Halliburton, or how it fits in the structure  
9 of subsidiaries of Halliburton?

10 BY WITNESS BROOM:

11 A In general, I believe Brown & Root is probably  
12 the largest in terms of total number of employees.

13 It is certainly by far the largest in terms  
14 of total revenue generated.

15 Q We had testimony from Mr. Oprea yesterday,  
16 I believe, that he was, I believe to this effect, convinced  
17 in part of the commitment of Halliburton, Inc., in addition  
18 to Brown & Root, to having a good nuclear program, and  
19 that was part of the reason that he was satisfied to go  
20 ahead and make a contract with Brown & Root.

21 Can you tell us what Halliburton people were  
22 involved in making that commitment to a successful nuclear  
23 program at the time that this contract was entered into?

24 BY WITNESS BROOM:

25 A I cannot answer as to the basis on which

2-9 1 Mr. Oprea formulated his opinion or gained his assurances.

2 I do know that the agreement by Halliburton  
3 to allow Brown & Root to procure an equity position in  
4 NUS, I know that their full understanding of the efforts  
5 which began a number of years ago to acquire experienced  
6 nuclear personnel to our payroll and build a team and  
7 attempt to enter the nuclear design part of the business  
8 was with the full knowledge of Halliburton, but I cannot  
9 speak to who may have said what to Mr. Oprea or to some  
10 executive of HL&P.

11 I was not here at the time and I was not privy  
12 to those discussions.

13 Q You've mentioned that at least Mr. Harbin  
14 and Mr. Paramore are involved in monthly meetings on the  
15 activities of Brown & Root.

16 Those are on the full range of Brown & Root  
17 activities, aren't they?

18 BY WITNESS BROOM:

19 A That's correct.

20 Q Do they become involved specifically, for  
21 example, in the review of Brown & Root's QA program for  
22 the South Texas Project?

23 BY WITNESS BROOM:

24 A No, they do not review the details of our  
25 program, but our program has been described to them,



2-10 1 and Mr. Paramore and Mr. Harbin are very much interested  
2 in the South Texas Project.

3 I've had personally a number of discussions  
4 with them during meetings with them. They are certainly  
5 not informed to the detail that our executive management  
6 is, but they are aware of the project; they are aware  
7 of the status of the project, and they are interested  
8 in the South Texas Project.

9 Q Turning to Brown & Root itself, you report  
10 to Mr. Rice, who is the -- Let me make sure I get your  
11 terminology correct. -- the Group Vice President of the  
12 Power Group?

13 BY WITNESS BROOM:

14 A That's correct.

15 Q And you are the Senior Vice President of the  
16 Power Group?

17 BY WITNESS BROOM:

18 A Yes, sir, I'm a senior vice president in the  
19 Power Group. I'm assistant to Mr. Rice as Group Vice  
20 President.

21 Q Maybe we are going to trip over terminology.

22 You are a senior vice president of Brown  
23 & Root in the Power Group, but you are the only senior  
24 vice president in the Power Group?

25 //

1 BY WITNESS BROOM:

2 A No, that is not correct.

3 What I meant to say is there are several senior  
4 vice presidents in the Power Group. I am one of them.

5 Q I'm sorry. I missed the rest of them on the  
6 chart.

7 You have, perhaps, answered this question,  
8 but I wanted to be clear on it.

9 The charts now, as you have corrected them  
10 and made one correction on each. They are now correct  
11 and show the correct reporting relationships and individuals?

12 BY WITNESS BROOM:

13 A Yes. I did make more than one correction  
14 on one of the charts.

15 Q Oh, yes, I didn't mean to say you --

16 BY WITNESS BROOM:

17 A Excuse me.

18 Q Are you aware of any imminent changes to either  
19 one of these that haven't occurred yet?

20 BY WITNESS BROOM:

21 A Yes. I can't put a timetable on it, but we  
22 are seeking a replacement for Mr. Saltarelli as the project  
23 manager for the South Texas Project.

24 We are looking at a number of candidates at  
25 the present time. I would hope we would recruit such

1 a person in the near future.

2 I can't really commit to the amount of time  
3 the recruiting process will take, but our intent is to  
4 have Mr. Saltarelli assume the responsibility as sponsoring  
5 officer for that project, but have another person occupy  
6 the role of project manager for the project.

7 In that sense, Mr. Saltarelli is serving in  
8 an interim capacity in that position.

9 That's the only change that comes to mind  
10 that might be imminent in nature.

11 JUDGE BECHHOEFER: Dr. Broom.

12 WITNESS BROOM: Yes, sir.

13 JUDGE BECHHOEFER: Pardon my, perhaps, ignorance,  
14 but what's a sponsoring officer?

15 WITNESS BROOM: A sponsoring officer simply  
16 refers to a practice that we have at Brown & Root which  
17 is similar to that which is practiced in a number of other  
18 engineering and construction firms, whereby a project  
19 management organization is set up with the responsibility  
20 of conducting the affairs of a project; but a partner  
21 in a partnership or an officer or senior officer or executive  
22 level contact in a different type structure is named as  
23 a sponsor to oversee the project, its activities, to have  
24 the primary responsibility for contacts with the client  
25 executive management in terms of providing them information,

2-13 1 really outside the day-to-day basic operational structure  
2 of the project.

3 JUDGE BECHHOEFER: So that's not his sole  
4 job then?

5 WITNESS BROOM: Oh, no.

6 JUDGE BECHHOEFER: Okay. You may continue.

7 BY MR. JORDAN:

8 Q I take it at the moment Mr. Saltarelli wears  
9 two hats?

10 BY WITNESS BROOM:

11 A Yes, two hats in the sense that he is both  
12 sponsoring officer, which is really not a required position  
13 in our project management scheme of things, and he is  
14 the acting or interim project manager for the project.

15 Q Now, we read in the newspapers sometime back  
16 as to Mr. Grote being sent to Puerto Rico to some other  
17 project.

18 Was that an accurate report?

19 BY WITNESS BROOM:

20 A No, that's incorrect.

21 Mr. Grote assumed the responsibility, again,  
22 as a sponsoring officer of a project which we've been  
23 awarded in Puerto Rico.

24 It will not consume the bulk of his time and  
25 he will be based here in Houston, and he will be responsible

1 for other projects.

2 Q So he remains in that slot as he is shown  
3 on the chart then?

4 BY WITNESS BROOM:

5 A Yes.

6 Q Okay. Turning to Attachment 1, would you  
7 explain for us and describe for us any major changes in  
8 this chart that have occurred since the beginning of 1977?

9 BY WITNESS BROOM:

10 A I'm not sure that I know of all the changes,  
11 that I can recall. Let me try.

12 I believe there has been some restructuring  
13 of the Marine Group under the marine executive vice president.

14 I believe that the division of that part of  
15 the company into eastern and western hemisphere operations  
16 was done since that time.

17 I'm not certain of that.

18 Marine engineering has been moved under the  
19 marine executive vice president since 1977. Formerly,  
20 it was in a Central Engineering Group that provided marine  
21 engineering services to the Marine Group.

22 The subsidiaries management senior vice president  
23 at the far left of the chart is a new position, I believe,  
24 since 1977, set up to manage a number of subsidiary companies  
25 to our company; that being the position on this chart

1 that Mid-Valley that I referred to earlier on Attachment  
2 now reports.

3 Corporate development is a new title, a grouping  
4 of services pulled together, formerly personnel and related  
5 matters.

6 That is a new box on the chart in its present  
7 form.

8 The Manufacturing and Process Industries Group,  
9 I believe it's been since 1977 that that has combined  
10 two previous groups; the Petroleum and Chemicals Group  
11 and Industrial Civil Construction Group were combined  
12 into one function.

13 I believe that occurred about a year, year  
14 and a half ago.

15 Mr. Jordan, those are the primary ones that  
16 come to my mind. I may be somewhat off about the dates  
17 on which some of those moves occurred, and I may have  
18 missed one.

19 Q That's fine.

20 BY WITNESS BROOM:

21 A Oh, I believe the position of senior executive  
22 vice president for operations has been created since 1977.  
23 I believe that's correct.

24 Q Okay. None of that, of course -- Related  
25 to the Power Group, I gather, there haven't been changes?

2-16

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

BY WITNESS BROOM:

A No, the basic structure of the Power Group has remained unchanged since 1975, with the exception of the removal of that Mid-Valley subsidiary reporting responsibility that I referred to earlier.

- - -

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

2-17

1 Q Perhaps you just answered my question on Attachment  
2 2. This structure that is shown on Attachment 2 has been  
3 the same since 1975, with the exception of that Mid-Valley  
4 change, or am I misinterpreting what you just said?

5 BY WITNESS BROOM:

6 A Yes, I believe that is a correct statement  
7 for the intent of your question, but let me not guess  
8 what you mean by your question.

9 Let me tell you what changes have occurred  
10 since 1977.

11 In 1979 I moved from the engineering organization  
12 to assistant to the group vice president box. Prior to  
13 that time there was no such position.

14 Q When you say you moved from the engineering  
15 position, you were where Saltarelli is now?

16 BY WITNESS BROOM:

17 A No. I was a vice president in the engineering  
18 organization. I was not in charge of all of the engineering.

19 I was in charge of a portion of the engineering.

20 Q Which one of these slots were you in, or is  
21 there something here that represents what you were --

22 BY WITNESS BROOM:

23 A I was in a box similar to those occupied by  
24 Mr. Owens and Mr. Bomke.

25 Some of the responsibilities in that whole



1 area reported to me at that time.

2 The financial and administrative box at the  
3 top of the chart and the personnel services box at the  
4 top for a time reported under Mr. Grote in operations.

5 They previously had been where they are now.  
6 They were moved to operations, and about a year ago, I  
7 think, they were moved back.

8 Q Do you remember when they were moved to operations?

9 BY WITNESS BROOM:

10 A I really don't remember.

11 Q Five years ago, some ballpark?

12 BY WITNESS BROOM:

13 A No, it was not five years ago. I would guess  
14 three years ago.

15 Q And then they moved back --

16 BY WITNESS BROOM:

17 A '77 or '78, something like that.

18 Q Okay, and then they moved back into these  
19 slots about a year ago?

20 BY WITNESS BROOM:

21 A About a year ago, I believe.

22 Q Any other changes of that sort?

23 BY WITNESS BROOM:

24 A Yes. Until early this year there was a box  
25 on the left-hand side of the chart corresponding to

1 Mr. Grote's position.

2           There was a senior vice president of construction.  
3 The person in that position resigned, and I suppose that  
4 box theoretically exists there today and may be filled  
5 one of these days; but it is a different arrangement in  
6 that the way it's shown now, you have three people,  
7 Mr. Ellis, Mr. Dodd and Mr. Ashley, all reporting to Mr.  
8 Rice's office, as opposed to them reporting through one  
9 person with over-all responsibility for construction.

10           Q       So that I can understand this chart, is the  
11 box that is South Texas Project the whole Brown & Root  
12 South Texas Project activities?

13           The other construction to the left are other  
14 projects? Is that a correct understanding?

15 BY WITNESS BROOM:

16           A       In a sense. Mr. Jordan, perhaps, if you'll  
17 permit me, I'll expand upon something that's in my testimony.

18           This chart represents an administrative chart  
19 as to where various resources we have in the group are  
20 located and how they are managed and allocated.

21           When we obtain a project, we set up a project  
22 management team. If it is an engineering and construction  
23 full-scope responsibility, we create an entire organization  
24 under a project general manager with engineering resources,  
25 construction resources and various operational support

2-20 1 services necessary to perform that contract.

2 That is set up as a functioning organization  
3 reporting to the client for the purposes of performing  
4 the engineering and construction of that project.

5 The structure you see on this chart is the  
6 management structure that oversees and supports those  
7 types of project management organizations, which is really  
8 the vehicle through which we accomplish our work.

9 On this particular chart, the South Texas  
10 Project is shown with the principle of people in that  
11 support organization under the project manager, simply  
12 because it is such a vast percentage or part of our current  
13 activities and resources.

14 JUDGE BECHHOEFER: Just to understand it,  
15 if you had other comparable projects, new boxes would  
16 spring up comparable to the South Texas box that you have  
17 here?

18 WITNESS BROOM: Conceivably we could show  
19 them on a chart, but at the present time we have several  
20 other projects.

21 They each are structured in the fashion that  
22 I've just described. They are much smaller in nature  
23 and we've not shown them on the chart in like fashion.

24 JUDGE BECHHOEFER: But that particular box  
25 that you have shown is the project management box for

2-21

1 South Texas?

2 WITNESS BROOM: Yes, sir. That shows the  
3 general project manager --

4 JUDGE BECHHOEFER: Or the team, I should say.  
5 You used the word "team."

6 That's the team that you set up for it?

7 WITNESS BROOM: Yes. It does not show --  
8 if I'm not missing something.

9 It does not show the engineering project manager.  
10 It does show the -- no.

11 It only shows the principal assistants to  
12 the project manager, the general project management team.

13 Of course, under that team, there is an engineering  
14 project manager and a construction project manager that  
15 reports to this project management team.

16 JUDGE BECHHOEFER: But I take it, persons  
17 like Mr. Ashley and Mr. Ellis would not have much to do  
18 with South Texas; is that correct?

19 WITNESS BROOM: I don't think Mr. Ashley would  
20 agree with that.

21 He spends quite a bit of his time looking  
22 at and evaluating and providing support to South Texas;  
23 but the answer is yes, he does not have any line responsibility  
24 in the project management organization.

25 The construction project manager for the South

1 Texas Project administratively has a home in the construction  
2 organization; but for the duration of his assignment to  
3 that project, he is assigned physically, completely, totally  
4 to that project and he answers to the project manager.

5 When he were to be removed from that project,  
6 when the project concluded, his home would be as a construction  
7 manager in the construction organization under Mr. Ashley,  
8 and would be subject for assignment to some other project.

9 JUDGE BECHHOEFER: I see. Okay.

10 WITNESS BROOM: A similar arrangement in engineering  
11 for our engineering personnel.

12 JUDGE BECHHOEFER: All right, thank you.

13 BY MR. JORDAN:

14 Q Dr. Broom, I'd like to go back with you, to  
15 travel back with you in your travels through Brown & Root.

16 We've gone into the position you've described  
17 that you were in as a vice president for engineering,  
18 where you were until 1979.

19 How long were you in that position?

20 BY WITNESS BROOM:

21 A. Do you want me to go backwards?

22 Q Yes.

23 BY WITNESS BROOM:

24 A. I was made a senior vice president in December  
25 of 1979, and I was made a vice president in December of

1 1976.

2 Prior to my occupying the organizational block  
3 that I indicated on the chart, I was in engineering as  
4 a senior vice president for a short period of time --  
5 I'm sorry.

6 I moved to that block in mid-'79 and was promoted  
7 to senior vice president in late '79, so I was not a senior  
8 vice president while I was in the engineering organization.

9 I was a vice president in the engineering  
10 organization all the way back to 1976, and prior to that  
11 time I was a manager in the engineering organization until  
12 sometime back until sometime in 1973; and as I recall,  
13 it was in the late summer or early fall, perhaps September,  
14 October. I'm not sure of the month in 1973 when I transferred  
15 to engineering.

16 Prior to that, I had been in business development  
17 for just a little over a year.

18 Q Okay. Now, I'd like to restrict my questions  
19 to going back to early 1977, the beginning of 1977 for  
20 a number of these positions.

21 First, the group vice president, Mr. Rice.  
22 Could you tell us who held that position from January  
23 1, 1977, to the present?

24 BY WITNESS BROOM:

25 A Mr. Joseph Munisteri, M-u-n-i-s-t-e-r-i, held

1 that position from prior to '77 up until January 1980.

2 Q And then Mr. Rice took over?

3 BY WITNESS BROOM:

4 A That's correct.

5 Q I gather the position that you now hold was  
6 a new position when you were placed in it, so we don't  
7 need to take that one back?

8 BY WITNESS BROOM:

9 A That is correct.

10 Q How about the quality assurance senior manager  
11 back to 1977?

12 BY WITNESS BROOM:

13 A In 1977 the group QA manager was Thomas Gamon,  
14 G-a-m-o-n, until 1980. I'm not sure of the month; I believe  
15 it was June.

16 Q So he was Mr. Vurpillat's predecessor?

17 BY WITNESS BROOM:

18 A No. I believe it was in June for an interim  
19 time period I took over as acting QA manager for, as I  
20 recall, it was two or three months until Mr. Vurpillat  
21 finally got disentangled from his previous employer and  
22 was able to join us in August of 1980.

23 Q How about operations - senior vice president  
24 back to 1977?

25 //

2-25  
1 BY WITNESS BROOM:

2 A I don't remember when the transition was made,  
3 but Mr. Grote's predecessor was Mr. H. L. Baker, and I  
4 believe he was in charge of operations in 1977.

5 I don't remember when Mr. Grote assumed that  
6 job, in '78 or '79. I can check.

7 JUDGE BECHHOEFER: Mr. Grote will be here --

8 MR. JORDAN: Since Mr. Grote will be here,  
9 we can ask him.

10 WITNESS BROOM: I'm sure he remembers when  
11 he took over that job. It was two to three years ago.

12 BY MR. JORDAN:

13 Q Going down into the South Texas Project then,  
14 we have first vice president and general manager, who  
15 you have just told us of one change.

16 Perhaps you could put the dates on those individuals  
17 and then go back to 1977.

18 BY WITNESS BROOM:

19 A The present project general manager is  
20 Mr. Saltarelli.

21 The previous project general manager was  
22 J. R. Geurts.

23  
24 - - -  
25



STP  
3-1  
he

1 Q Now, when was that transition between Geurts and  
2 Saltarelli?

3 BY WITNESS BROOM:

4 A In May.

5 Q May?

6 BY WITNESS BROOM:

7 A 1981.

8 Mr. Geurts assumed project management of the project  
9 in September of 1979.

10 Q And his predecessor?

11 BY WITNESS BROOM:

12 A Mr. Henry Kirkland, K-i-r-k-l-a-n-d, was project  
13 manager from June 1979 to September 1979.

14 Q All the way back from January 1, '77?

15 BY WITNESS BROOM:

16 A Mr. James, of Jim, Pepin, P-e-p-i-n, was project  
17 manager from November 1978 until June of 1979.

18 Mr. Carl Crane, C-r-a-n-e, was project general  
19 manager from April 1978 until November of 1978.

20 Mr. George Bierman, B-i-e-r-m-a-n, was project  
21 manager from the inception of the project up until that time.

22 Q Okay. Let's take the next position down, which is  
23 deputy general manager and site manager, back to January 1, '77.

24 First, when was the transition made between Crane  
25 and Thompson?

3-2 1 BY WITNESS BROOM:

2 A Mr. Thompson joined us in April of this year.

3 But let me add something at this point, Mr. Jordan.

4 Q Sure.

5 BY WITNESS BROOM:

6 A The position of deputy general manager was not in  
7 use back in the earlier parts of the project. We had a  
8 project general manager and we had an engineering project  
9 manager and a construction project manager, and the title that  
10 some of these individuals now carry as deputy or assistant  
11 general project manager, those do not go back through the  
12 entire history of the project, and so I may have some trouble  
13 in tracing each title back with you.

14 Q Okay. When you get to a problem, bring it up.

15 BY WITNESS BROOM:

16 A I will. I can tell you who the responsible  
17 individual in charge of construction for the project is, who  
18 at the present time has the title deputy general project  
19 manager and site construction manager.

20 I can trace that position back, and I'll try to  
21 drop out that deputy general manager at the appropriate time.

22 Mr. J. A. Thompson joined Brown & Root in April  
23 of 1981 in the capacity of deputy general project manager and  
24 site construction manager.

25 Prior to that time, from February of 1981,

1 Mr. Carl Crane.

2 Q That's the same Carl Crane who for a while served  
3 as the general manager?

4 BY WITNESS BROOM:

5 A Yes, sir. Let me give you the next name and then  
6 I'll comment on the transition that took place.

7 Mr. Crane was in that role for about two months,  
8 February to April of 1981.

9 Mr. R. Leasburg, L-e-a-s-b-u-r-g, was assistant  
10 general project manager, or deputy general project manager,  
11 and construction manager, from June 1980.

12 Mr. Leasburg was lured away from us, and Mr. Crane  
13 was asked to step in for an interim period until we procured  
14 the services of Mr. Thompson.

15 Going back further, in November of 1977 Mr. U. D.  
16 Douglas -- he did not have the title of deputy general project  
17 manager at that time. His title was construction manager, or  
18 site construction manager.

19 Q Now, when he was in that role, were the duties  
20 that were eventually taken by Leasburg, Crane and Thompson  
21 split differently?

22 BY WITNESS BROOM:

23 A Not in the main. There may have been some slight  
24 differences, but basically in those roles, there's one fellow  
25 in over-all charge of construction and one engineering and one

1 general project manager.

2 Q And Douglas was which?

3 BY WITNESS BROOM:

4 A He was a construction project manager.

5 Q Okay.

6 BY WITNESS BROOM:

7 A Prior to that, in May of 1977, Mr. J. Dodd, D-o-d-d.

8 Prior to that, in April of 1978, Mr. J. Monroe.

9 Q Do you mean April of 1977?

10 BY WITNESS BROOM:

11 A No, April '78.

12 Q You told us U. D. Douglas was November '77?

13 BY WITNESS BROOM:

14 A Yes.

15 Q And Dodd was May '77?

16 BY WITNESS BROOM:

17 A I'm sorry. U. D. Douglas was November '79,

18 excuse me. I'm sorry. U. D. Douglas is November 1979,

19 J. Dodd, May 1979, Jim Monroe, April 1973, Carl Crane since

20 May of 1974. That's prior to moving into the field.

21 Q Now, what is the position of deputy general manager

22 that Mr. Cook is shown as holding?

23 BY WITNESS BROOM:

24 A That's a new position that's been created. I'm

25 not sure when that position exactly -- within the last year,

3-5

1 six or eight months ago. It's a position created to provide  
2 the general project manager a single individual to look to  
3 to pull together all the home office services, including  
4 engineering.

5 Q Is he effectively the engineering project manager?

6 BY WITNESS BROOM:

7 A No. We have an engineering project manager, and  
8 Mr. Cook is between that engineering project manager and the  
9 general project manager to pull together information concerning  
10 engineering and other home office support services as well.

11 Q Has he been the only one to hold the position?

12 BY WITNESS BROOM:

13 A Yes, I believe so.

14 Q I'd like to now move away from that for a moment.

15 JUDGE BECHHOEFER: Mr. Jordan, would this be a  
16 good time for a morning break?

17 MR. JORDAN: It does happen to be, doesn't it.  
18 That's fine.

19 JUDGE BECHHOEFER: Let's take about a 20-minute  
20 break.

21 (A short recess was taken.)

22

23

24

25

1 JUDGE BECHHOEFER: Back on the record.

2 MR. JORDAN: In order to save time, over the break  
3 I have discussed with Applicants' counsel some possibilities of  
4 getting some charts, and so on, to avoid some of my further  
5 questions in this organizational area, and so for the moment  
6 I'm going to go ahead and get away from that, and ideally, I  
7 won't have to come back with more than a few questions.

8 BY MR. JORDAN:

9 Q Let me go on, Dr. Broom, to discuss your own  
10 background briefly.

11 You note at the bottom of Page 3 that before you  
12 came to Brown & Root you were the manager of nuclear activities  
13 for Middle South Services, a subsidiary of Middle South  
14 Utilities.

15 What is the Middle South Services and what is its  
16 function? Or at least what was it at the time you were there?

17 BY WITNESS BROOM:

18 A It was and is today a service company which is a  
19 subsidiary of a utility holding company; Middle South Utilities  
20 is the parent company of, I believe, five operating utility  
21 companies: Arkansas Power & Light Company, Louisiana Power &  
22 Light Company, Mississippi Power & Light Company, New Orleans  
23 Public Service, and a small company that was called ARKMO Power,  
24 and why I said I'm not sure whether it's four or five companies,  
25 that, I believe, has now been incorporated into the Arkansas

1 Power & Light organization as an operating division.

2 But Middle South Utilities was the holding company  
3 that owned these operating utility companies.

4 The service company, Middle South Services, where  
5 I was employed, was in the same offices as the Middle South  
6 Utilities offices, and we performed a variety of service  
7 functions to the utility companies, ranging from insurance  
8 and rate assistance and forecasting of various types, and my  
9 area was a nuclear group which provided some consulting  
10 assistance to the operating companies in the nuclear area as  
11 they entered the nuclear power field.

12 Q Could you describe for us the full range of what  
13 that nuclear activities aspect of Middle South Services  
14 involved?

15 BY WITNESS BROOM:

16 A Yes, I will. I was employed by Middle South  
17 Utilities in Middle South Service in 1967, shortly after the  
18 first of the Middle South Utilities companies, Arkansas Power &  
19 Light Company, had entered the nuclear field.

20 They had purchased their first nuclear plant  
21 just some few months before I joined them.

22 I came to work at the Service Company and I was the  
23 first employee in that organization in the nuclear area in  
24 the Service Company.

25 They hired me to come and help Arkansas Power &

1 Light Company plan its staffing, its organization, help with  
2 the preparation of the preliminary safety analysis report and  
3 help with the licensing process in getting a construction permit  
4 for that job.

5 The early months, or perhaps the first year to  
6 two years that I was there I did the bulk of that work myself.  
7 We had the one project underway, and I spent a great deal of  
8 my time in Arkansas working in the offices of Arkansas Power &  
9 Light Company doing those things.

10 Sometime later I began to hire a small staff, and  
11 had a half a dozen, or maybe eight or ten people by the time I  
12 left the company.

13 My responsibilities from the beginning of providing  
14 those kinds of specific consulting services to Arkansas Power &  
15 Light Company had broadened into a plan to set up a nuclear  
16 fuel management capability at the parent company level to  
17 provide nuclear core analysis and fuel management services for  
18 all of the operating companies, so that it would not be  
19 necessary for three or four different companies to staff up  
20 in this area themselves with the necessary computer programs  
21 and technical expertise that in those days was pretty hard to  
22 come by, and still is, I guess, to some extent.

23 One specific area that I participated in at Arkansas  
24 Power & Light Company, and then later with the other two  
25 companies, Mississippi Power & Light and Louisiana Power & Light,



4-4  
1 as they entered the nuclear field with their first nuclear  
2 projects, was assistance in writing those sections of the PSAR  
3 related to their quality assurance program.

4 If you'll recall, 1967 there was no Appendix B,  
5 and of course, during the licensing of Arkansas Unit No. 1  
6 and then of course in the first submittals of the PSAR for  
7 the other two plants, Appendix B was in its formative stages,  
8 and then published and then being implemented, and so it was  
9 during that whole time frame in which the Appendix B was  
10 being developed and promulgated, I suppose is the word.

11 We were making plans in the utility industry to  
12 meet our responsibilities under that, and so I assisted in  
13 the planning of that program and documentation of it.

14 Q When you came to Brown & Root you worked for a year  
15 in business development.

16 Is business development marketing, or what is it?

17 BY WITNESS BROOM:

18 A Yes, precisely; calling on utility companies around  
19 the country, acquainting them with Brown & Root's capabilities  
20 of engineering and construction, attempting to get work for  
21 engineering or construction, or both, from the utility  
22 community.

23 Q In the course of that business development, do you  
24 recall who you tried to sell Brown & Root to?

25 / / /

1 BY WITNESS BROOM:

2 A Yes. I called on my former employers, of course,  
3 in the Middle South system of companies, and a great number  
4 of the utilities around the country.

5 At that time in the power sales organization there  
6 were only two of us and we covered the United States. We're  
7 a bit more expanded and broadened than that now. We have  
8 several people.

9 At that time one other fellow and I sort of split up  
10 the country and called on a large number of utilities.

11 I'll be glad to name some of them if you'd like  
12 for me to.

13 Kansas Gas & Electric, Texas Utilities, the Southern  
14 Company, Southern Services, Florida Power Corporation, Southern  
15 California Edison, Union Electric, Southern Indiana Gas &  
16 Electric, Nebraska Public Power District, Oklahoma Gas &  
17 Electric, Central Power & Light Company, El Paso Electric,  
18 Arizona Public Service, Virginia Electric Power Company,  
19 Carolina Power & Light Company.

20 Q Unless you have some other specifics that are  
21 important, that's fine. I'm sure you could go on for some  
22 time.

23 BY WITNESS BROOM:

24 A I have a long list of clients.

25 Q Okay. You stayed in that job for about a year then.

1 BY WITNESS BROOM:

2 A. That's correct.

3 Q. And then went to the power engineering department  
4 where you were responsible for nuclear licensing and QA, and  
5 I gather that was from 1973 to 1975, and shortly after the  
6 power group was formed in 1975 you were then -- the QA  
7 responsibility was split and you became the head of the  
8 nuclear licensing, is that accurate?

9 BY WITNESS BROOM:

10 A. Not exactly; in the interim we had created a group  
11 called environmental services as the NEPA rules were promulgated  
12 and we were into environmental matters, and so I had that group  
13 reporting to me in addition to that.

14 Q. So you had nuclear licensing, environmental matters  
15 and QA?

16 BY WITNESS BROOM:

17 A. Yes.

18 Q. And then you lost QA?

19 BY WITNESS BROOM:

20 A. Then I lost quality assurance, that's correct.

21 Q. And then the structure was changed and QA went  
22 elsewhere?

23 BY WITNESS BROOM:

24 A. Yes. And at the same time there had been another  
25 structural change within the engineering group, and by the time

4-7 1 QA was transferred away from me, I also assumed the responsi-  
2 bility for what we called the discipline engineering groups  
3 which provide the manpower pool to furnish people to staff  
4 the engineering projects.

5 So what we called our discipline managers, our  
6 staff discipline managers, were reporting to me at that time,  
7 and the recruiting and wage administration and a variety of  
8 responsibilities in that regard fell under me at the time.

9 Q What were your nuclear licensing responsibilities  
10 focused particularly first on the period 1973 to 1975? And  
11 you can certainly explain if they changed after that time  
12 while they were still under you.

13 BY WITNESS BROOM:

14 A No. The responsibilities of that group have not  
15 changed, and of course, that group initially reported to me.

16 The first thing I had to do was hire us a topnotch  
17 nuclear licensing person to head that group up, and I did that,  
18 and I'm pretty proud of the fellow I selected. He's still  
19 with us today. Mr. Al Geisler.

20 I recruited him and he joined our company and  
21 under his direction the Brown & Root input to the South Texas  
22 PSAR was developed and our participation in the licensing  
23 affairs of South Texas were performed.

24 Q So the role -- I guess this would really be the  
25 role both of the nuclear licensing and of the environmental

4-8 1 aspect of your responsibilities was to do the work, put the  
2 documents together, figure out what the commitments were and  
3 get to the NRC and make sure that that plant got licensed?

4 BY WITNESS BROOM:

5 A Yes, sir, except you understand that in both of  
6 these roles we're providing a service to a client because we  
7 are not the applicant, HL&P is the applicant, and so it is  
8 actually HL&P that goes to the NRC and conducts the meetings;  
9 but yes, all of the support that's necessary from our scope or  
10 our standpoint as design and constructors, that's a good  
11 summary of what our responsibilities were.

12 Q Okay. I don't mean to mix up who gets licensed  
13 and who doesn't.

14 BY WITNESS BROOM:

15 A Yes, sir; certainly.

16 Q Now, that function of yours over nuclear licensing  
17 and the additional environmental aspect continued to June of  
18 '79?

19 BY WITNESS BROOM:

20 A Yes. With the qualification that I had also  
21 gained a discipline engineering responsibility in the interim,  
22 but yes, I had responsibility over those two areas up until  
23 that time. That's correct.

24 Q Mr. Vurpillat, I would turn to you for a moment.

25 With respect to your testimony on Page 5, maybe on

300 7TH STREET, S.W., REPORTER'S BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

1 to Page 6, I'm simply not clear, beginning at Lines 32 to 33  
2 you state, "Prior to joining Brown & Root I spent eight years,"  
3 and so on.

4 I'm not clear where in the chronology this eight  
5 years and succeeding periods are.

6 Is this eight years immediately prior to being at  
7 Brown & Root?

8 BY WITNESS VURPILLAT:

9 A No. The way that's stated, that was the first  
10 employment after getting out of college, and it's consecutive  
11 from then on.

12 Q Okay. So if we go through this, each experience  
13 you have is from college forward?

14 BY WITNESS VURPILLAT:

15 A That's correct.

16 Q And then therefore the last one we get to is the  
17 one immediately before Brown & Root?

18 BY WITNESS VURPILLAT:

19 A That's right.

20 Q Was that the United Engineers' & Constructors  
21 position?

22 BY WITNESS VURPILLAT:

23 A Yes. That's right.

24 Q Okay. I had it backwards, myself.

25 I want to ask a few questions about the organization

4-10

1 under you. Otherwise, I hope to be able to leave a number of  
2 questions in that area for later when perhaps we can save some  
3 time.

4 I don't know if you are familiar with the chart  
5 that is in Attachment 2 to Mr. Frazar's testimony.

6 BY WITNESS VURPILLAT:

7 A Yes. That's part of the Frazar/Goldberg Panel?

8 Q Yes, sir.

9 BY WITNESS VURPILLAT:

10 A Yes.

11 Q This particular chart shows the power group  
12 quality assurance manager, and I take it that's you.

13 BY WITNESS VURPILLAT:

14 A That's me, that's right.

15 Q All right, and then it shows a line over to the  
16 South Texas Project.

17 BY WITNESS VURPILLAT:

18 A Yes, sir.

19 Q How many other boxes are there underneath there,  
20 in other words, parallel to the South Texas Project?

21 BY WITNESS VURPILLAT:

22 A There are --

23 Q What do they represent?

24 BY WITNESS VURPILLAT:

25 A There are two other boxes immediately reporting to

4-11

300 7TH STRE. . S.W. , REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

1 me. One is the Comanche Peak quality assurance project  
 2 manager, and then I have a Houston assistant department  
 3 manager who is responsible for all of the activities in the  
 4 QA department except for those directly related day by day  
 5 to South Texas and Comanche Peak.

- - -

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



1 BY MR. JORDAN:

2 Q Does that mean everything that's non-nuclear?

3 BY WITNESS VURPILLAT:

4 A Reporting to the Houston assistant QA manager is  
5 fossil QA, is the auditing group, the administration group for  
6 the department, and some staff positions, most of which are  
7 unoccupied at this time. The quality assurance engineering  
8 staff renders surveillance, and so forth.

9 Q But none of what goes on under the Houston assistant  
10 department manager is related to Comanche Peak or STP?

11 BY WITNESS VURPILLAT:

12 A That's correct, except for the auditing activity.

13 Q Then the auditing is related?

14 BY WITNESS VURPILLAT:

15 A Well, that group audits both Comanche Peak and  
16 South Texas, yes.

17 Q Back to you, Dr. Brocm, and getting to Brown & Root  
18 and STP in particular, can you tell us how many people Brown &  
19 Root now has employed at the STP site, as of today?

20 BY WITNESS BROOM:

21 A No, sir, I don't have an up-to-date figure on that.  
22 I could get you one.

23 Q Do you know the total that is employed related to  
24 the STP Project?

25 / / /

1 BY WITNESS BROOM:

2 A As of today, no, I don't have any up-to-date  
3 figures on the employment. As you know, there have been some  
4 recent reductions in staff, and of course attrition takes place  
5 all of the time. I don't have a current figure.

6 Q I hope I didn't make things too tight for your  
7 answer by saying up to today. What's the most recent figure  
8 that you would know?

9 BY WITNESS BROOM:

10 A I don't have an actual number with me. I didn't  
11 bring a copy of that material with me. I can get you some  
12 numbers very quickly if you tell me specifically what you  
13 want to know.

14 Do you want to know the total number of employees  
15 on STP?

16 Q I'll tell you specifically a number of categories  
17 that I guess I thought we would be ready for today, and some  
18 of them you may have now, some of them you may not.

19 First, the total number employed at the site.

20 BY WITNESS BROOM:

21 A We have that information concerning QA. You're  
22 not talking about QA?

23 Q I'm talking about the total Brown & Root employment  
24 at the site, and the total on the project, whether on or off  
25 the site.

4-14

1                   And I want the reductions in force for the year  
2 beginning January 1, 1981, with breakdowns by the disciplines or  
3 areas in which positions were reduced, and also the dates.

4 BY WITNESS BROOM:

5           A        I didn't understand your last part there, a  
6 breakdown by --

7           Q        By areas; for example, at least as I look at --  
8 think of areas, electrical --

9 BY WITNESS BROOM:

10          A        Or crafts?

11          Q        -- crafts, or administrative, whatever the  
12 appropriate area is, and I would like, if there's an  
13 administrative area that the distinction be made between  
14 clerk-typist type of positions and more managerial types of  
15 positions.

16                   JUDGE BECHHOEFER: Mr. Jordan, what years were  
17 those?

18                   MR. JORDAN: My request relates to January 1, 1981  
19 to the present.

20 BY MR. JORDAN:

21           Q        I gather that you have figures on QA personnel.  
22 We might as well get those now.

23                   Mr. Vurpillat, do you have what the present total is?

24 BY WITNESS VURPILLAT:

25          A        Yes, I have the present total at the site, and I

4-15

1 believe this is as of the 1st of May and not as of today, and  
2 the number --

3 Q Is that the 1st of May or the 1st of June?

4 BY WITNESS VURPILLAT:

5 A Pardon me, the 1st of June.

6 As I recall, that number is 228 at the site.

7 Q That's not the total of QA altogether?

8 BY WITNESS VURPILLAT:

9 A That's total QA at the site.

10 Q Okay. What's the total QA, period?

11 BY WITNESS VURPILLAT:

12 A You would need to add to that the group in Houston,  
13 including vendor surveillance people who are not always in  
14 Houston, of 38.

15 Q So those are current figures?

16 BY WITNESS VURPILLAT:

17 A That's correct. Plus we have auditors who do not  
18 work full time on South Texas. They spend the majority of  
19 their time working on South Texas, but they are not assigned  
20 to the South Texas Project QA group.

21 Q Those are the people in the organizational block  
22 you just described a little while ago?

23 BY WITNESS VURPILLAT:

24 A Yes. That's correct. That's right.

25 / / /

1 BY WITNESS BROOM:

2 A Mr. Jordan, I have a problem in that regard,  
3 concerning your request for the total project personnel.

4 It's easy for us to identify the number of people  
5 at the site, but when you talk about home office personnel,  
6 we have a large number of people who work part time on South  
7 Texas and we have a larger number that work full time, and I'm  
8 not sure what you want.

9 Q I would like certainly the ones that work full time,  
10 no question of that.

11 I'm not interested in people who spend an  
12 insignificant amount of time or who have basic responsibilities  
13 in other areas and just get in conversations now and then, but  
14 somebody who really works half time on the project I think we  
15 should know about it. I'll put it at that, half time.

16 BY WITNESS BROOM:

17 A Okay. We'll try to accommodate that; you know,  
18 that's a detailed check of literally thousands of time sheets  
19 to arrive at that, but we'll do the best we can.

20 Q Unless someone else wants to burden you that way,  
21 unless there are people who are particularly important and  
22 that can be identified without going through a great long time  
23 sheet check, I'm not going to worry about that.

24 BY WITNESS BROOM:

25 A Okay. We'll do the best we can, and we'll tell you

4-17

1 the basis on which we did it when we give you the data, and  
2 then we can pursue it from there.

3 JUDGE BECHHOEFER: One clarification.

4 Mr. Vurpillat, were the numbers that you gave for  
5 QA personnel solely those employed by Brown & Root and not  
6 including those assigned to the Brown & Root office by Houston,  
7 this Houston group that you mentioned?

8 WITNESS VURPILLAT: It does not include any HL&P  
9 people. The numbers that I gave also do not include MAC people.  
10 There are nine MAC people currently, Management Analysis Company.

11 JUDGE BECHHOEFER: Right. Right.

12 WITNESS VURPILLAT: And they're all assigned --  
13 they're all at the site. So you need to increase that number  
14 by nine to get a total complement of QA.

15 JUDGE BECHHOEFER: Thank you.

16 - - -  
17  
18  
19  
20  
21  
22  
23  
24  
25

1 BY MR. JORDAN:

2 Q What about the PTL people?

3 BY WITNESS VURPILLAT:

4 A Mr. Jordan, I'll have to get that number for you.  
5 I don't have it.

6 Q I wasn't really asking for the number. That's not  
7 included in the nine?

8 BY WITNESS VURPILLAT:

9 A No, that is not included, no.

10 Q Now, I would like a breakdown of this from  
11 January 1 to the present, reductions in force, or what the  
12 totals have been.

13 Do you have that information?

14 BY WITNESS VURPILLAT:

15 A I have it with me. I can get it for you at the  
16 next break.

17 Q Okay. Fine.

18 BY WITNESS VURPILLAT:

19 A Again, would you tell me exactly what you want  
20 breakdown-wise?

21 Q What I'd like is first the totals at January 1,  
22 with any RIF's or changes in the numbers to the present, and  
23 a breakdown by however you are organized, like discipline,  
24 area, where the numbers have changed.

25 / / /

4-19

1 BY WITNESS VURPILLAT:

2 A. Okay. Fine.

3 Q. Gentlemen, I'd like to talk with both of you for a  
4 while about the underlying question of quality assurance,  
5 quality in general, how it's achieved, what kinds of issues,  
6 and I know you've been listening to a lot of that kind of talk  
7 since this hearing began, and you both appear to be important  
8 to Brown & Root's attitudes.

9 I'll start with you, Dr. Broom.

10 One of the points that has been discussed  
11 considerably throughout the hearing is this concept of doer's  
12 responsibility, that the constructor or whoever is responsible  
13 for actually doing the work is the one who really has to be  
14 responsible for quality, and particularly the recommendation  
15 has been that this is the reason that they should have a  
16 quality assurance/quality control function as well as the  
17 construction function.

18 And the correlary to that that's mentioned so many  
19 times is that you can't inspect quality into construction,  
20 and I'd like you, Dr. Broom, to begin with, if you could tell  
21 us whether you agree with what you've heard of that philosophy  
22 and if you could discuss for us your own thoughts along that  
23 line.

24 BY WITNESS BROOM:

25 A. Mr. Jordan, I'll be glad to discuss my philosophy



1 along that line. I don't know how to answer how I feel about  
2 all that I've heard. I'm not sure I've heard everything here,  
3 and let me try expressing my philosophy and you guide me with  
4 whatever specific questions you might have in regard to the  
5 preceding testimony.

6 Q That will be fine.

7 BY WITNESS BROOM:

8 A I believe that you cannot inspect quality into a  
9 product. Quality is an achievement of the requirements that  
10 are established by the design and specifications, and they  
11 must be met by the people who fabricate, manufacture or perform  
12 the work, construct, or whatever the subject is in question.

13 The doer has the responsibility for doing the work  
14 right. Quality assurance/quality control can verify that  
15 that's done, but they can't achieve quality.

16 Q You said -- well, let me ask you, Mr. Vurpillat,  
17 the same question.

18 Could you provide us your thoughts or your basic  
19 philosophy of achieving quality as it relates to this doer's  
20 responsibility concept that has been discussed?

21 BY WITNESS VURPILLAT:

22 A I don't have any problem with what has been said  
23 in this regard before. To say it again in my own words, the  
24 quality of the product, the conformance to the requirements of  
25 the product has to be achieved by the people organizations, and

4-21

1 by that I don't mean companies, I mean pieces of a company,  
2 groups doing the work, that actually do the work.

3 Let me take it one step further. The quality  
4 control, or the inspection function is also responsible for  
5 the quality of its work. In other words, it has to do the  
6 inspection correctly, so it is not excluded from the quality  
7 of its own product, if you will.

8 - - -  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

1 Q Is that it?

2 BY WITNESS VURPILLAT:

3 A As related to can you inspect quality in/no  
4 you can't inspect quality into the product; and yes, it  
5 is the responsibility of the people who are actually making  
6 the project.

7 Q I notice -- and basically, therefore, you  
8 agree with what Dr. Broom has said?

9 BY WITNESS VURPILLAT:

10 A Yes.

11 Q I notice, Dr. Broom, that you said that achieving  
12 quality -- what your goal is to achieve and meet the designs  
13 and specifications of the product?

14 BY WITNESS BROOM:

15 A That is correct.

16 Q Isn't achieving the proper designs and specifications  
17 indeed also part of achieving the quality of the product?

18 BY WITNESS BROOM:

19 A Yes, that is correct.

20 You must be sure that you have set the proper  
21 requirements and then you must be sure that you meet those  
22 requirements.

23 Q So that getting to quality is really a pervasive  
24 question of being sure on the line that you're doing it  
25 right, whether the line is the production of the design,

1 specifications and so on, or whether the line is pouring  
2 concrete or actually doing the construction?

3 BY WITNESS BROOM:

4 A Or doing the inspections properly; that's  
5 correct.

6 Q Or doing inspections properly, where the question  
7 is the quality of doing the inspections?

8 BY WITNESS BROOM:

9 A Yes.

10 Q This is really for both of you, and we may  
11 as well begin with Dr. Broom again.

12 If you were to approach a project similar  
13 to STP, and the only reason I say "similar to," I don't  
14 want to take you out of that particular one, but a project  
15 of that magnitude and significance.

16 If you were coming to it, how would you go  
17 about evaluating the quality of the project?

18 BY WITNESS BROOM:

19 A The quality of the project?

20 Q The quality of the work that is being done  
21 by the company that's in the role that Brown & Root plays  
22 at the South Texas Project?

23 BY WITNESS BROOM:

24 A If I were in the role of a client or regulator  
25 or management of the constructor? What is my point of

1 view?

2 Q I will put you in a role of an independent  
3 consultant who has been brought in to evaluate the quality.

4 How do you do that?

5 MR. NEWMAN: I'm going to have to object.  
6 I'm not sure I understand what that question mean.

7 "How do you evaluate the quality?" The quality  
8 of what?

9 MR. JORDAN: I must say I think I was fairly  
10 clear.

11 The quality of the work being done by the  
12 company in the role of Brown & Root.

13 WITNESS BROOM: The role of the quality assurance  
14 program, assuming that the project has a quality assurance  
15 program, is to verify the quality of the work being done.

16 If I were an independent outside consultant  
17 coming in and faced with that responsibility, I suppose  
18 I would begin by evaluating the quality assurance program.

19 BY MR. JORDAN:

20 Q And then? I want to get the whole picture  
21 of how you would go about evaluating the quality of the  
22 work being done.

23 BY WITNESS BROOM:

24 A I would determine whether the quality assurance  
25 program was being performed correctly, or in conformance

1 with what was supposed to be done.

2 I would review the results of inspections.

3 I would review the results of audits.

4 I would review the records that that QA program  
5 had generated.

6 I would determine if I had confidence in the  
7 people and the organization doing that work, and on that  
8 basis, depending on what I found, I would render a judgment  
9 that the quality was acceptable, or the quality was not,  
10 again depending on what I found.

11 Q This is based on an evaluation of the quality  
12 assurance program?

13 BY WITNESS BROOM:

14 A Yes. That would be where I would start, yes.

15 Q Okay. So that's where you would start. Where  
16 would you go from there?

17 BY WITNESS BROOM:

18 A Depending on what I found, I might want to  
19 verify that the inspections, for instance, were being --  
20 I'm not exactly sure how to express this.

21 I would look at inspection records.

22 Q This is quality control inspection records?

23 BY WITNESS BROOM:

24 A Yes. I would also look at inspections being  
25 performed. Now, I view that a part of the QA program.

5-5 1 Perhaps you don't.

2 Q No, I do. That's why I was wondering. I  
3 thought you had sort of finished with QA.

4 BY WITNESS BROOM:

5 A In that sense, I think that's as far as you  
6 would have to go to determine the quality of the work  
7 being done and the quality of the project or product.

8 Q Mr. Vurpillat, would you answer the same question?

9 BY WITNESS VURPILLAT:

10 A I believe that were I asked to perform that  
11 function, the first thing that I would look at would be  
12 the requirements that had been established for the function,  
13 and after writing those down or determining what those  
14 were, then check the conformance of the product that had  
15 been generated to those requirements, and you'd do that  
16 a number of ways.

17 When you can get to the product, you can assess  
18 it by inspecting it, by reviewing it, any number of ways.

19 You can do that in part, assuming there are  
20 certain time restraints and you don't have an infinite  
21 amount of time to do this, and you have limited resources.

22 I would do that on a sampling basis and probably  
23 at a relatively high level of product.

24 Q I'm sorry, I guess I didn't understand you.

25 A relatively?

1 BY WITNESS VURPILLAT:

2 A Higher level of product.

3 By that I mean if you are going to be evaluating  
4 design and have a limited amount of time and good engineering  
5 resources, design resources to use, I would evaluate conceptual  
6 design, or a very high level of the design.

7 As far as manufactured products are concerned,  
8 I would look at specifications and I would look at the  
9 qualifications of the manufacturer and things like that;  
10 and then some of the larger products, maybe a reactor  
11 vessel for instance; at that level, rather than getting  
12 into nuts and bolts kind of a thing.

13 And you could do that to a limited extent,  
14 but the quality assurance program, the definition of the  
15 program, the program itself, the staffing, the execution  
16 of the QA program and a review of the documentation would  
17 probably be the best place to go to get a good idea of  
18 the quality of the over-all product, of the project as  
19 you put it, to get the best idea on a limited amount of  
20 time with a limited amount of resources.

21 Q Now, so far both of you -- Dr. Broom has relied  
22 entirely on evaluation of QA/QC. Mr. Vurpillat you have  
23 added something of what sounds to me like an independent  
24 check.

25 //



5-7 1 BY WITNESS VURPILLAT:

2 A Well, I think that that doesn't differ with  
3 what Dr. Broom says. It just expands a little bit on  
4 it.

5 Obviously, you want to check requirements  
6 and check into the conformance of the product, the various  
7 products to the requirements is part of the quality assurance  
8 program, or is a quality assurance function.

9 Q Assuming that you found that the quality assurance  
10 program appeared to be acceptable and meet the accepted  
11 standards for quality assurance programs and to be operating  
12 as intended, is there anywhere you might look for some  
13 sort of independent evidence that -- as a doublecheck  
14 on whether you were correct about your evaluation of the  
15 quality assurance program?

16 In other words, let me be more specific. You  
17 mentioned, Mr. Vupillat, checking aspects of the product  
18 itself. That would be an independent check of whether  
19 the quality assurance program had in fact worked, wouldn't  
20 it?

21 BY WITNESS VURPILLAT:

22 A If you're assuming that part of the quality  
23 assurance program on this hypothetical -- or this particular  
24 project, including also checking the product, then yes.

25 If you found the product out of conformance

5-8  
1 and the quality assurance program was supposed to have  
2 checked it before and didn't, and had checked it and had  
3 not discovered the same things you had, you could draw  
4 certain conclusions.

5 Q Similarly, if you were informed of failures  
6 in construction, and I can take examples from this case  
7 just to illustrate.

8 If you were informed of some number of welds  
9 didn't meet specifications, that kind of information,  
10 although somebody had given it to you, rather than you  
11 had actually gone and dug it up yourself, would be the  
12 kind of information that would lead you into an examination  
13 of whether in fact the QA program itself was working properly,  
14 wouldn't it?

15 BY WITNESS VURPILLAT:

16 A I think you would have to take that kind of  
17 information, using percentage of rejections of welds as  
18 an example. You would have to put that in a perspective  
19 of time along in the project, similar numbers on similar,  
20 projects and this sort of thing, to determine whether  
21 or not you had a program that was effective.

22 Q I take it you don't disagree with what --  
23 BY WITNESS BROOM:

24 A No. I basically agree with that.

25 Q Getting back to fundamental quality in a

5-9 1 project, in the work such as Brown & Root is doing at  
2 the South Texas Project, or really, virtually any other  
3 type of work, I think, would you say that in what you  
4 would consider to be a quality project that you would  
5 expect to find good quality work, essentially, across  
6 the board?

7 In other words, in each of the areas of the  
8 project, there is going to be a pretty high level of quality.

9 MR. NEWMAN: Mr. Chairman, I'm going to have  
10 to object to that question.

11 The term "quality" has not been defined. Are  
12 we talking about quality in terms of the documentation  
13 quality, in terms of the structures?

14 Again, I think the witness really requires  
15 clarification of that to get a meaningful response for  
16 the record.

17 Maybe Mr. --

18 MR. JORDAN: I'll be glad to get back into  
19 it a little bit more.

20 BY MR. JORDAN:

21 Q I am not talking about specific documentation  
22 or structures or something of that sort.

23 I'm trying to get to your general and your  
24 basic understanding of the concept of quality.

25 Now, I will pursue this.

1 MR. NEWMAN: That's been asked and answered.

2 MR. JORDAN: The specific area of the concept  
3 of it has been asked and answered, but this question has  
4 not.

5 JUDGE BECHHOEFER: Okay.

6 BY MR. JORDAN:

7 Q When I say "quality" in talking about a project  
8 that you might be looking at and where you are asking  
9 the question of whether there is in fact quality there  
10 or it is a quality project, wouldn't you expect for a  
11 quality project where quality is being achieved, that  
12 whatever the different areas of the project are -- and  
13 in this case it's construction, engineering, welding,  
14 so on, and I'll add some others and you can comment on  
15 them, too.

16 It's secretarial work, it's administrative  
17 work, it's recordkeeping.

18 Wouldn't you expect that across the board  
19 there would be a high level of quality in what you would  
20 consider to be a quality project?

21 MR. NEWMAN: Mr. Chairman, the question really  
22 isn't susceptible of that kind of a response.

23 I don't know of a program in which the quality  
24 of the secretarial work, for example, would possibly be  
25 related to any matter before this Board.

5-11

1           The fact that a secretary makes a mistake  
2 typing, if that's the nature of the question he's asking,  
3 I don't believe it's getting us a useful response.

4           I think that if what we're trying to get at  
5 is does the job conform to specifications, which is basically  
6 the definition of quality which has been offered by the  
7 witnesses, then I think one can answer meaningful questions;  
8 but I think these other questions which really depart  
9 from that definition of quality and essentially have no  
10 definition will not elicit a useful response for the record.

11           JUDGE BECHHOEFER: Well, the way I perceive  
12 the question -- maybe I'm wrong -- is witnesses are being  
13 asked if the project can be a quality project if there's  
14 a major weak link someplace. Is that what you're driving  
15 at, because if you're not, then you'll have to explain  
16 it to me.

17  
18           - - -  
19  
20  
21  
22  
23  
24  
25

5-12 1 MR. NEWMAN: Well, I think it's just the opposite  
2 of that.

3 You talked about a major link. There's none  
4 of these projects that I could remotely imagine having  
5 secretarial work counting as a major component of the  
6 project.

7 MR. JORDAN: I would refine that. That's  
8 not at all far from what I was driving at.

9 When I threw in secretarial, and you'll recall  
10 that I said that these are certainly areas that you might  
11 comment on, because they are obviously peripheral to whether  
12 somebody pours concrete correctly.

13 I'm trying to get to the basic over-all quality  
14 of a project. Presumably, secretarial work would not  
15 be a fatal weak link, but it is also reasonable to ask  
16 whether on a quality project you wouldn't expect quality  
17 to be demanded everywhere.

18 Secretarial happens to be in everywhere, and  
19 if he wants to say, obviously, some areas are less important  
20 than others, he's welcome to do that.

21 JUDGE BECHHOEFER: I think the witness can  
22 answer in those terms.

23 BY WITNESS BROOM:

24 A. I'll try.

25 I'm a little confused about your use of the

5-13 1 term "quality project."

2 Let me see if I understand.

3 I presume you mean a project where work is  
4 being done properly, the QA program is being implemented  
5 properly in general conformance with all of the requirements.

6 If that's what you mean when you refer to  
7 a quality project?

8 Q I would add one thing to that, and if you  
9 feel this differentiates it significantly from your previous  
10 understanding, you can explain it; but what I would add  
11 to that is those responsible for the project have a commitment  
12 to and proper attitudes toward the achievement of quality.

13 BY WITNESS BROOM:

14 A Okay. I'll accept that.

15 Q Okay, then, go ahead.

16 BY WITNESS BROOM:

17 A In such a project, if those type of attitudes  
18 pervade the project, you would expect to see generally  
19 good quality work wherever you looked.

20 I guess that's the question you asked.

21 It does not say, though, that on a project  
22 that is meeting all of the necessary requirements in a  
23 general sense, you will not find deviations and a few  
24 people here, a few people there, a few instances here.

25 An area you try to start up, you may have

5-14 1 significant problems in getting it debugged, if you will,  
2 or whatever.

3 That may be a project that fully meets all  
4 requirements.

5 I guess what I'm really having a little problem  
6 with is that if work is done not in conformance with the  
7 requirements the first time, you don't like that; but  
8 if you detect that and you bring it into requirements,  
9 you still have met the quality required for the project.

10 We don't like having to redo any work. We  
11 want to do work correctly every time the first time.

12 We try to do our work that way. We don't  
13 always make it.

14 That doesn't mean that a job on which we are  
15 having problems not doing everything right the first time  
16 isn't a quality project, because in my definition of the  
17 term, and I believe you agreed to that definition a moment  
18 ago, that the quality project is the one that ultimately  
19 does meet all the requirements.

20 Certainly, in a nuclear powerplant, before  
21 the plant is successfully finished and granted an operating  
22 license, all the requirements have to be met. That's  
23 a given.

24 Q I would by no means -- I accept what you've  
25 said, certainly, and by no means want to imply that Brown &



1 Root or you or anyone else should be superhuman.

2 We obviously all make mistakes as we are going  
3 along.

4 I guess I would -- Let me ask you,  
5 Mr. Vurpillat, if you essentially agree or if you have  
6 anything to add with what he's just said?

7 BY WITNESS VURPILLAT:

8 A No, I agree with what Dr. Broom said.

9 Again, if we're talking about a project that  
10 is as massive as the South Texas Project, for instance,  
11 or any similar undertaking, whether it be a regulated  
12 project or an unregulated project, the size and scope  
13 of a nuclear powerplant, one certainly would expect mistakes  
14 to be made, but would expect the final product to be correct  
15 and that there will be systems set up within the project  
16 to make sure.

17 Again, whether it's a regulated project or  
18 an unregulated project.

19 Q Now, Dr. Broom, I gathered from your testimony  
20 that you -- and I'm referring here to page 13, lines 8  
21 through 14, according to my note -- that you are convinced  
22 that Brown & Root's attitudes towards quality at this  
23 project have been proper from the beginning.

24 I just want to be sure that that's what the  
25 meaning of your sentence is there.

1 BY WITNESS BROOM:

2 A Yes, sir. Since my first joining the Brown  
3 & Root Company, I have experienced the proper attitude  
4 among the management of the company and among the vast  
5 majority of people.

6 I have encountered people with the wrong attitude,  
7 and if I've ever had anything to say about it, we've done  
8 something about it in those cases.

9 Q I take it that in your view that given the  
10 definition of quality as you gave us a moment ago, you  
11 consider this to be one of Brown & Root's quality projects?

12 BY WITNESS BROOM:

13 A The South Texas Project?

14 Q Yes.

15 BY WITNESS BROOM:

16 A I'm not proud of any deficiency we have on  
17 that job. I'm certainly not proud of the deficiencies  
18 that were determined by 79-19.

19 Am I satisfied with the -- I guess you are  
20 implying some quality level of the job?

21 No, I'll never be satisfied the quality level  
22 of the project.

23 Do I believe we're meeting the quality objectives  
24 of the project?

25 Yes. We have had problems in doing that in

1 the past; probably still have a few problems left.

2 Q But those -- I qualified my statement by relying  
3 on your definition of quality which you had given, as  
4 opposed to some sort of broad definition.

5 Your definition takes into account the problems  
6 that a company faces when it does a complicated job, like  
7 a nuclear powerplant for example, and the fact that doing  
8 things wrong the first time, as long as you correct them,  
9 is not an indicator of the lack of quality.

10 That's what my question got to, and I gather,  
11 given that definition, that this is a quality project  
12 for Brown & Root?

13 BY WITNESS BROOM:

14 A I'd like to make two comments.

15 First of all, I did not mean to imply that  
16 whenever we do work incorrectly the first time, that that's  
17 acceptable.

18 That is not our goal. I think I stated that  
19 we've instructed and preached and continue to instruct  
20 our people that doing work correctly the first time is  
21 our requirement.

22 That's not a QA program requirement. That's  
23 a management objective.

24 That's the principle on which our policies  
25 are based. We want every employee to do everything right

1 the first time, and we want them to feel a personal commitment  
2 to doing their job, and I'll throw in the secretaries  
3 you were referring to earlier.

4 We want everybody to be concerned about the  
5 quality of their work.

6 So in that sense, I did not mean to imply  
7 that I was satisfied with the situation where work was  
8 not being done correctly the first time.

9 I do recognize that we probably will not achieve  
10 our goal perfectly, and in that sense I'd like to say  
11 that at South Texas I believe we have been identifying  
12 those cases where we have not done the work correctly,  
13 and we have been correcting that situation.

14 In that sense, I think we have been conforming  
15 to quality requirements.

16 Q Moving on from this area a bit, at the top  
17 of page 15, I have a mechanical question.

18 You reference annual reviews, "annual QA/QC  
19 program review...performed...by B&R management personnel  
20 with the assistance of...the Management Analysis Company  
21 and the Southwest Research Institute."

22 I'd simply like to ask you when the MAC and  
23 Southwest Research became involved in consulting or assisting  
24 on these annual reports?

25 //

5-19 1 BY WITNESS BROOM:

2 A I believe the first of those reviews was in  
3 1976.

4 BY WITNESS VURPILLAT:

5 A We just finished the fifth one.

6 BY WITNESS BROOM:

7 A At any rate, the -- I believe the first of  
8 those reviews was in '76. It could have been '75.

9 But since that time, annually -- and when  
10 I say "annually," I'm talking about once a calendar year.

11 I believe that in the thrust of the show-  
12 cause response, if you counted months, we probably didn't  
13 make it within 12 consecutive months for the year 1980,  
14 but we completed it prior to the end of that calendar  
15 year.

16 We have conducted a review annually of our  
17 entire program, and we've done that by using people from  
18 within our own organization for a couple of purposes outside  
19 just the review of the program.

20 We wanted to use that review as an occasion  
21 to take people who are not directly in the quality assurance  
22 organization and get them involved in a quality assurance  
23 activity, to show them how review of a program like that  
24 works, get them some firsthand closeup experience to those  
25 type of activity.

5-20  
y  
v

1 We've done that by selecting people from generally  
2 supervisory and management personnel within our group  
3 to form a team of people, and we've provided some assistance  
4 to that team through an outside consultant experienced  
5 in quality assurance to head up that team, or to serve  
6 as a consultant to that team to help plan and guide and  
7 train those people and watch them as they go through this  
8 review process.

9 That's been done at least since 1976.

10  
11 - - -  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

1 Q And that's been MAC and Southwest Research  
2 have been involved?

3 BY WITNESS BROOM:

4 A Yes. MAC was used for several years, and  
5 this last year Southwest Research Institute did it.

6 I'm not real sure as to which firm helped  
7 us each year.

8 Q Okay, but they didn't do it together?

9 BY WITNESS BROOM:

10 A No. No.

11 Q Okay. On page 17, Dr. Broom, you refer to --  
12 I'm sorry. Judge Bechhoefer?

13 JUDGE BECHHOEFER: I just wanted one clarification  
14 of that last point we were on.

15 WITNESS BROOM: Yes, sir.

16 JUDGE BECHHOEFER: I believe your testimony  
17 talks about a review, and the question asked, I think,  
18 referred to a report.

19 Does the review produce a report every year?

20 WITNESS BROOM: Yes, the review produces a  
21 report.

22 JUDGE BECHHOEFER: Thank you.

23 WITNESS BROOM: I didn't hear you say "report."  
24 I'm sorry, I thought you said "review."

25 MR. JORDAN: I thought I said "review."

5-2

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 654-2346

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

BY MR. JORDAN:

Q On page 17, you refer here in your Answer 21 to a meeting in early 1978 in which Mr. Fitch met with a number of people, including QA/QC personnel, and I don't know whether to say he gave them a talk or a speech, but apparently he spoke to them about commitment to quality; and you also have in the following paragraph a situation in early 1979 when Mr. Bazor held a meeting with key supervisory personnel and then reaffirmed management philosophy, as you put it.

Let me ask you first, since it doesn't seem to appear specifically that Mr. Bazor was referring to quality assurance/quality control in that discussion?

BY WITNESS BROOM:

A Yes, and meeting all requirements.

I don't remember everything that Mr. Bazor said, but certainly he addressed those subjects.

Q Let me ask you, first: What prompted each of these meetings, beginning with the one in early 1978?

BY WITNESS BROOM:

A Mr. Jordan, since I've been involved in nuclear projects with Brown & Root, we've had these type sessions.

They are not anything formally scheduled; they are getting everybody together out at the construction site and talking to them. People involved in the management



6-3  
1 of our construction organization do that from time to  
2 time.

3 It's a part of what we think is an over-all  
4 obligation to not just simply write a memo stating what  
5 your policy is, but to get out and visit the job and talk  
6 to people and let people see management representatives,  
7 let them see that they are interested in the work by their  
8 presence on the site, have a chance to talk to them.

9 I was -- In developing this testimony, I  
10 was simply recalling some instances that came to mind  
11 where I happened to be present, and I particularly recall  
12 these instances.

13 There have been several others. I could probably  
14 recall some more.

15 I don't remember any specific reason for  
16 Mr. Fitch making this talk. He had done that on previous  
17 occasions at other projects.

18 I don't really know why he did that. I know  
19 what he said, but I don't know why.

20 I don't place any significance on him doing  
21 that.

22 In the case of Mr. Bazor, he did that specifically  
23 because he was new in his job. A lot of the people knew  
24 him, but had not seen him after he had been given this  
25 responsibility, and so he came down to, you know, say,

5-4  
1 "Here I am, and I'm your new boss, and we're still committed  
2 to the policies that you've heard of before," and reinforce  
3 policies that they had had transmitted to them by others.

4 I remember that being the specific reason  
5 that Mr. Bazor made his talk.

6 I believe he asked me about it or mentioned  
7 to me before he did that that he thought it would be a  
8 good idea, what did I think; and I said, "Sure, you ought  
9 to get down there soon after you take office, you know,  
10 and make such a talk."

11 Q Were you present at each of these meetings?

12 BY WITNESS BROOM:

13 A Yes, I believe so.

14 I certainly was aware of Mr. Bazor's talk.

15 I remember Mr. Fitch's talk.

16 Q You don't recall specifically whether you  
17 were there at Mr. Bazor's talk?

18 BY WITNESS BROOM:

19 A I talked with Jim Bazor about that talk and  
20 I talked to him afterwards, and I believe I was there;  
21 but I can't promise that I was there.

22 Q Can you tell us how long the Fitch meeting  
23 lasted?

24 BY WITNESS BROOM:

25 A Half an hour, something like that, as I recall.

1                   These were not prepared speeches.

2                   Q        Could you tell us what areas Mr. Fitch covered?

3 BY WITNESS BROOM:

4                   A        Mr. Fitch?

5                   Q        Yes.

6 BY WITNESS BROOM:

7                   A        He covered the fact that this is a nuclear  
8 powerplant project, that we have rules and regulations  
9 we have to comply with and he expects all people to meet  
10 those requirements.

11                            Our quality assurance program requirements  
12 must be adhered to.

13                            I don't remember him specifically addressing  
14 in that particular talk reporting things to the NRC. I  
15 do remember him making reference to the open-door policy  
16 and feeling free to report things.

17                            He may have mentioned reports to the NRC.  
18 I don't recall that in that particular talk.

19                            That's been some time ago.

20                   Q        You don't have a copy of what he said or anything  
21 of that sort?

22 BY WITNESS BROOM:

23                   A        No, I don't. I don't remember there being  
24 a transcript.

25                   Q        You didn't take any notes yourself, did you?

1 BY WITNESS BROOM:

2 A No, I did not.

3 Q You haven't reviewed any notes of it since  
4 that time?

5 BY WITNESS BROOM:

6 A No.

7 I should add one other thing at this point.  
8 There was a practice among our construction  
9 management people for a long time whereby periodically --  
10 and again, this is not a scheduled thing. I would guess  
11 a couple of times a year, maybe more frequently than that,  
12 that the management of the project tries to get down --  
13 the management of our construction organization tries  
14 to get around the construction sites and have a dinner  
15 meeting with the construction supervision.

16 So these kind of talks are -- I don't want  
17 to say frequent, because they are not, certainly, every  
18 month, but they are common on our jobs.

19 I've been to a number of those. There's no  
20 script. There's no minutes kept.

21 It's a very informal thing, but the principal  
22 officer there generally stands up and makes 10 or 15 minutes  
23 of remarks at the beginning or the end.

24 We have a question-and-answer session. Anybody  
25 got anything to complain about, any questions, any changes

6-7 1 in policy that may be bothering someone, restatement of  
2 policy and restatement of our commitment to our policies  
3 is normally included in those things.

4 So it would not be normal for me to make notes  
5 or have a transcript of these kind of talks, and I have  
6 not reviewed anything like that.

7 Q These talks here fall within what you just  
8 described as those sorts of talks?

9 BY WITNESS BROOM:

10 A Yes. I don't remember Mr. Fitch's being at  
11 a dinner meeting.

12 I believe it was somewhere there on the job  
13 site. We called a bunch of people together, as I remember  
14 it.

15 Q But that sort of general, periodic, sit down  
16 and sort of talk about what's happening, and emphasize --

17 BY WITNESS BROOM:

18 A Yes, sir.

19 Q And so those are really open to talk about  
20 whatever the situation is at the plant, aren't they?

21 BY WITNESS BROOM:

22 A Yes, they are.

23 JUDGE BECHHOEFER: Mr. Jordan, let me ask  
24 one further followup there.

25 MR. JORDAN: Yes.

5-8  
1 JUDGE BECHHOEFER: Would you differentiate  
2 those meetings from meetings which might be held to consider  
3 or resolve specific problems which may have arisen; or  
4 alternatively, would these meetings be used as a vehicle  
5 for considering a lot of specific matters together?

6 WITNESS BROOM: I'll have to say yes to all  
7 of those.

8 First, in these type meetings, a number of  
9 problems of all types can be discussed, and frequently  
10 are.

11 On the other hand, we have had separate meetings  
12 to address specific problems.

13 I suppose you'd call it a meeting. We've  
14 chosen to address people in a formal fashion to state  
15 clearly a policy because of some problem that has occurred.

16 So we've had more formal meetings, documented  
17 meetings, brochures prepared, passed out and distributed.

18 In my testimony I refer to the occasion in  
19 early January of 1980 where we made that talk that, unfortunately,  
20 mentioned cost and schedule in the talk.

21 But that particular talk was there for a specific  
22 purpose, not cost and schedule, but to emphasize to everyone  
23 our commitment to QA.

24 JUDGE BECHHOEFER: That was not the -- fall  
25 in the category of meetings that you've just been talking

5-9 1 about?

2 WITNESS BROOM: No, it was a different type  
3 of meeting. It was a meeting called specifically for  
4 that type of presentation.

5 We had had another meeting of that nature  
6 the year before. I remember it as about mid-1979.

7 I don't believe we had a transcript or a  
8 handout, but we had a formal talk to people about resolving  
9 disputes in a proper fashion and that we didn't tolerate  
10 confrontations and harassment and those kind of things.

11 We've had both. We've had formal, get four  
12 or five hundred people in a big room together and talk  
13 to them, as well as supervisory dinners, informal discussions,  
14 as well as even smaller groups.

15 I guess what I'm trying to say, I think these  
16 type meetings begin anytime anybody from management visits  
17 a job site.

18 You walk around and talk to people in a variety  
19 of types of one-on-one conversations or meetings of all  
20 types, and I think we try to emphasize our company policies  
21 as appropriate, through all of those kind of exchanges,  
22 up to and including a big formal meeting where we call  
23 people together for a specific purpose, such as the occasions  
24 I just referred to.

25 JUDGE BECHHOEFER: Mr. Jordan.

-10 1 WITNESS BROOM: I guess I could add one more  
2 comment.

3 What I'm really talking about is communication.  
4 We have a large organization with a lot of people, and  
5 communicating with that big bunch of people is a problem.

6 It's a continuing problem. It's something  
7 that management has to stay attuned to all of the time.

8 We have to worry about keeping our people's  
9 attitude right, and that takes a variety of techniques.

10 You can write memos and you can write letters  
11 and you can make postings on bulletin boards; but you  
12 can also go talk to people and, you know, let them see  
13 you and hear you and have a chance to ask you questions.

14 It takes all of those kinds of actions to  
15 maintain communications with a large organization of people.

16 It's the only way I know to get it done. A  
17 newspaper helps, but it's not the answer.

18 JUDGE BECHHOEFER: You may proceed.  
19  
20  
21  
22  
23  
24  
25

- - -



5-11  
1 BY MR. JORDAN:

2 Q On Mr. Bazor's meeting, to be clear again,  
3 I think you said -- I just want to be sure.

4 This was, essentially, his inaugural meeting  
5 out there. He went out and sort of said, "Here I am.  
6 We're here to do the job right and serve our client, make  
7 sure quality is there," all of those various things, sort  
8 of a new boss' pep talk?

9 BY WITNESS BROOM:

10 A Well, I think it was a little more than that,  
11 because as I indicate here, I remember distinctly him  
12 talking about this issue of we wouldn't tolerate people  
13 harassing and that kind of thing.

14 Q Excuse me, if I may just break in there.

15 You said you remember him distinctly talking  
16 about it?

17 BY WITNESS BROOM:

18 A Yes.

19 Q You were there and remember it?

20 BY WITNESS BROOM:

21 A I remember our discussing what he was going  
22 to say at the meeting, and I think I was there.

23 I do not -- Unfortunately, I can't remember  
24 whether I was in his physical presence.

25 Q You do not distinctly remembering him talking

1 about it at the meeting?

2 BY WITNESS BROOM:

3 A Excuse me. He and I discussed the things  
4 that he was going to say at the meeting.

5 I'm certain of that.

6 Q Fine.

7 I may have cut you off. If you want to proceed,  
8 continue with what you were saying, that's fine.

9 BY WITNESS BROOM:

10 A That particular item sticks in my mind because  
11 he felt, and I agreed, that he should direct some remarks  
12 toward that subject because of Mr. Swayze's allegations  
13 and the issues surrounding Mr. Swayze and our implementation  
14 of that procedure to resolve disputes; and in that context  
15 of him being the new boss, he felt it important to re-  
16 emphasize his commitment toward that aspect of our business,  
17 that we did not tolerate any harassment.

18 We wanted people to conduct themselves in  
19 a professional manner and resolve matters professionally.

20 I believe he said that. I think I heard him  
21 say that, but I can't swear to that.

22 Q Just to pull back and look at the broad picture  
23 again for a moment on quality, achieving quality and so  
24 on.

25 This is really for both of you.

5-13

1                   Wouldn't you say that the ultimate goal of  
2 your management commitment, of meetings of the sort you  
3 just described, of meetings such as the early -- the January  
4 4, 1980 meeting, I believe, that you've mentioned, and  
5 subsequent meetings on quality is to achieve a really  
6 pervasive sense throughout the project of a commitment  
7 to quality, such that the employees top to bottom have  
8 that sense of their own and management's commitment?

9 BY WITNESS BROOM:

10           A        I'm not sure I understand your question.

11                    You say was that the purpose of those meetings?

12           Q        Yes, and isn't that the purpose of those and  
13 those sorts of meetings?

14 BY WITNESS BROOM:

15           A        It certainly should be. I would hope that  
16 that comes across in all of those meetings every time.

17                    That's certainly one of the main matters that  
18 we need to communicate to our people continuously.

19                    I won't say that at every supervisor dinner  
20 on every construction project those matters are talked  
21 about. There may be some other issue that's discussed  
22 in one particular meeting; but in general, that's a correct  
23 statement.

24           Q        And over the course of a project that's been  
25 going on for a number of years with these kinds of meetings

6-14

1 going on and so on, you would expect, wouldn't you, that  
2 there would be a pervasive sense of quality among the  
3 work force, of their own commitment and of management's  
4 commitment to quality?

5 BY WITNESS BROOM:

6 A Yes, I think that we should expect our employees  
7 in general to be committed to quality.

8 I won't say that we can expect to have a hundred  
9 percent of our people, but we certainly strive toward  
10 that. Yes.

11 BY WITNESS VURPILLAT:

12 A If I can add --

13 Q Please do.

14 BY WITNESS VURPILLAT:

15 A I think it's important to also indicate that  
16 not only do we expect them to have this attitude of quality,  
17 we need to make sure that they understand that management's  
18 attitude is quality, and they also have to know that we  
19 expect them -- not only do we have to expect them, but  
20 they have to know we expect them to have this, and that  
21 they will be judged accordingly in their performance;  
22 and it's important that these points get across.

23 Q And you would expect -- I think that Dr. Broom  
24 agrees with this. I'm not sure he focused on it.

25 You would expect, then, that over the number

1 of years of a project of this sort where you've been making  
2 this effort all along to drive in the quality goal, that  
3 there would be a pervasive sense -- not a hundred percent,  
4 of course -- among the work force of the management's  
5 commitment to quality, wouldn't you?

6 BY WITNESS VURPILLAT:

7 A Yes, I would expect that that would be perceived.  
8 Yes.

9 BY WITNESS BROOM:

10 A Mr. Jordan, I have to add that I would expect  
11 that, but unfortunately, it doesn't always happen.

12 Q Oh, I can understand that, yes.

13 I'd like to get to -- Let me first get to  
14 the question of the relationship between quality assurance  
15 part of Brown & Root, particularly as it relates to South  
16 Texas Project, and the folks who were responsible for  
17 the engineering and the construction and actually getting  
18 the work done.

19 I want to begin by asking isn't -- at least  
20 as I can see -- Mr. Grote reports directly to you, does  
21 he not, Mr. Broom, and Mr. Vurpillat does, as well?

22 BY WITNESS BROOM:

23 A Yes, that's correct.

24 Organizationally, all of the people in the  
25 group report to me, because I'm in the box with Mr. Rice.

6-16 1 I spend the majority of my time concerned  
2 with quality assurance and the matters shown on that first  
3 line there, personnel and administrative services.

4 Mr. Grote does not report to me directly every  
5 time something comes up.

6 He may very well talk to Mr. Rice directly.

7 Ours is not -- Mr. Rice and I share one  
8 suite of offices together, and when Mr. Grote or anybody  
9 else has a problem, they may very well take it to Mr.  
10 Rice instead of me; but I'm kept informed of what goes  
11 on and I can certainly act in Mr. Rice's absence.

12 We have that kind of a relationship.

13 Q Well, taking you and Rice as a single entity  
14 there, Vurpillat and Grote are equals in that they both  
15 report to either one of you, whichever they get to?

16 BY WITNESS BROOM:

17 A That is correct.

18 Q I'd like you to tell us -- I'm not asking  
19 for dollars. We've been through this before.

20 I'm not asking for specific dollars, but I  
21 do want you to tell us the comparison of the compensation  
22 and benefits that are obtained by Mr. Grote and those  
23 that are obtained by Mr. Vurpillat.

24 BY WITNESS BROOM:

25 A I knew you were going to ask that and I

6-17  
1 made some notes and I can't find them right now.

2 I'm going to make a statement and then I'll  
3 verify it later.

4 Mr. Grote is compensated more than Mr. Vurpillat.  
5 I believe the differential is -- I believe it's about  
6 20 percent aggregate, over-all.

7 Q Taking into account all the various types  
8 of compensation?

9 BY WITNESS BROOM:

10 A Yes, sir.

11 Q You wanted to make a statement?

12 BY WITNESS BROOM:

13 A No. That is my statement.

14 I'll verify that by checking my notes. That's  
15 what I remember.

16 I don't carry everybody's salary around in  
17 my head, but I did do some checking because I heard you  
18 question this area of some HL&P people earlier.

19 I remember it's like 15, 20 percent difference.  
20

21 - - -  
22  
23  
24  
25

STP  
7-1  
he

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

1 I'm not sure of the implication of that question.

2 I think it is also fair to point out that there's a  
3 considerable difference in the number of people in responsi-  
4 bilities of the relative positions.

5 I'm not sure that if Mr. Grote were to resign and  
6 we were attempting to recruit someone to fill his slot, that  
7 that number might not be significantly larger or smaller.

8 But your question was comparable compensation fair  
9 enough.

10 Q I was going to ask you a few more comparisons, and  
11 I think I'll hold until later on my remaining questions in the  
12 area, because I think we can save time by doing that, I suspect,  
13 but let me go first to the South Texas Project quality assurance  
14 manager who works for you, Mr. Vurpillat.

15 BY WITNESS VURPILLAT:

16 A Yes, sir.

17 Q I take it that his counterpart is the South Texas  
18 Project vice-president and general manager, Mr. Saltarelli, and  
19 obviously the reason I say that is that he is -- is the QA  
20 manager, is that Mr. Smith?

21 BY WITNESS VURPILLAT:

22 A The project QA manager is Mr. Smith, yes.

23 Q Okay. Let's put a name on him.

24 Mr. Smith reports directly to you as the head of  
25 the QA function for the South Texas Project, whereas



7-2  
1 Mr. Salterelli -- and you might answer the question for  
2 Mr. Geurts as well, since there's a bit of a flow through  
3 this position -- reports directly to Grote, who appears to be  
4 your counterpart; are they not counterparts?

5 BY WITNESS VURPILLAT:

6 A I think it's difficult to make that kind of a  
7 comparison with the matrixed organization, the project  
8 organization that we're talking about.

9 You're talking about lines on an administrative  
10 organization chart and where do they fit.

11 I think I have to answer your question by saying  
12 I don't consider those to be comparable positions in that on  
13 the project Mr. Smith, the project quality assurance manager,  
14 is responsible for a discreet discipline within that project --  
15 on that project.

16 It happens that because that discreet discipline  
17 is quality assurance/quality control, it is independent from  
18 the over-all project management organization.

19 However, it still is a discreet discipline operating  
20 on the project, so if we're looking for comparisons, I would  
21 have to say that the comparison would be somewhere below the  
22 individual that was in charge of the entire project, the  
23 general project manager.

24 Q Would you say it would be the individual -- is he  
25 comparable then -- I'm trying to a grasp on discreet discipline --

7-3

1 is he comparable to whoever is in charge of all the concrete,  
2 for example, or is he --

3 BY WITNESS VURPILLAT:

4 A No.

5 Q Maybe he's comparable to whoever is in charge, say,  
6 of all the civil structural?

7 BY WITNESS VURPILLAT:

8 A No, I think not. I think that if you're going to  
9 try to draw a comparison, and I'm not sure that you can,  
10 exactly, that he would probably be comparable to the engineering  
11 project manager, or the construction project manager.

12 Q Okay. So those two -- comparable to those two  
13 levels, I see.

14 BY WITNESS VURPILLAT:

15 A In the fact that those people are responsible for  
16 all of the activities within a complete discreet discipline.

17 Q Okay. As you could see, the term "discipline" had  
18 me confused a bit.

19 BY WITNESS VURPILLAT:

20 A I apologize.

21 Q My problem.

22 In any case, I would ask, then, for the compensation  
23 of the person in the South Texas Project vice-president and  
24 general manager position.

25 I'm afraid we're going to have difficulty with

7-4 1 comparables, because we don't know what comparables are, we  
2 don't know who compares to whom, so we're going to need the  
3 specific figures.

4 So let me begin with the South Texas Project  
5 vice-president and general manager. That's one.

6 BY WITNESS BROOM:

7 A You want his salary?

8 Q And the full amount of compensation. There may be  
9 benefits that aren't within the salary.

10 MR. AXELRAD: Mr. Chairman, I don't believe that  
11 we should need to have any information with respect to specific  
12 salaries.

13 If, for whatever purposes, Mr. Jordan would like  
14 to have a comparison of one position to another position,  
15 whether or not they are in fact comparable, perhaps Dr. Broom  
16 can provide that.

17 If he wants a comparison of the two positions that  
18 Mr. Vurpillat has indicated may be comparable, perhaps that  
19 comparison could be provided.

20 MR. JORDAN: I'll be glad to work with comparables  
21 for the moment and see what we get.

22 MR. AXELRAD: I must admit that I'm not sure, you  
23 know, how relevant any of this is, and to what extent the  
24 Board will indulge obtaining that particular kind of information.

25 Mr. Vurpillat has made it quite clear that it is

7-5  
1 difficult to establish comparability because of differences in  
2 responsibility.

3 He was in essence almost forced to make a  
4 comparison by the persistent questioning of Mr. Jordan, and  
5 I'm not sure to what extent that is going to contribute any-  
6 thing useful to the record.

7 MR. JORDAN: If I may respond just briefly to  
8 that, as I said before, I'll be glad to avoid specific numbers  
9 if comparables seem to be working.

10 But I must say that I don't think that  
11 Mr. Vurpillat's opinion of whether they are comparable or not  
12 is the definitive point here. I think that's something that  
13 we are all going to have to be looking at and argue about  
14 ultimately.

15 MR. AXELRAD: If I might --

16 MR. JORDAN: I have withdrawn the question on  
17 specific salaries, so I don't know whether there is an  
18 objection pending or not.

19 JUDGE BECHHOEFER: I guess there would not be.

20 MR. AXELRAD: No, there is not at this point.

21 WITNESS VURPILLAT: I'd like to add something.

22 BY MR. JORDAN:

23 Q Please do.

24 BY WITNESS VURPILLAT:

25 A You said that you don't feel that I can evaluate

1 the comparable positions, and I think probably I can.

2 Q Well, I don't mean to say that you can't, and  
3 form your own opinion on it. Obviously, in the position you're  
4 in you can do that, but that is -- all I was saying for the  
5 benefit of the Board and the rest of us is that your opinion  
6 is only part of the over-all decision that the Board has to  
7 reach in evaluating who's comparable to whom. Obviously you  
8 can evaluate as you see it.

9 Let me start, then, with Mr. Smith, if you could  
10 compare him with Mr. -- it looks to me as if you should  
11 compare him with Mr. Geurts as the last person actually in  
12 the South Texas Project vice-president/general manager position,  
13 in the position as opposed to an acting sort of position, isn't  
14 that a fair way to do it?

15 BY WITNESS VURPILLAT:

16 A Well, I can --

17 MR. AXELRAD: Mr. Chairman, I would like to object  
18 to the question for the reasons that I started to give before.

19 It appears to me that we're embarking on developing  
20 a number of comparisons which are really not going to be useful  
21 additions to the record.

22 I recall quite vividly a number of questions that  
23 Judge Lamb asked two of our witnesses on the stand previously,  
24 which went quite well to pointing out the various aspects of  
25 responsibilities, experience, background, and a number of

7-7  
1 other factors which can lead to the different salaries and  
2 different ranges being applicable in the individual positions,  
3 and I'm not sure that this is going to be a useful addition to  
4 the record.

5 MR. JORDAN: It seems to me that there are points  
6 to be made on why those constitute relevant or significant  
7 reasons for differences in compensation, and so on, and that  
8 can be gotten into on redirect. It hardly makes the issue  
9 irrelevant at this point, or unhelpful at this point.

10 JUDGE BECHHOEFER: Does the Staff have any view  
11 on that?

12 MR. REIS: I think this figure alone, the  
13 comparison, this comparison alone would not tell us anything.

14 I take it that Mr. Jordan, though, is going to go on,  
15 I presume, the line of questioning and ask the next level down  
16 that Mr. Vurpillat just testified where he saw a comparability.

17 I think with those comparisons in the record we  
18 might have some indication of how they are looked at, because  
19 compensation very often is a mirror of how somebody is looked  
20 at as an important somebody in an organization.

21 It's not definitive evidence, by any means, but  
22 it is probative.

23 WITNESS BROOM: I don't know who to ask this  
24 question to, but could I make a comment about this general  
25 subject?

7-8 1 JUDGE BECHHOEFER: Yes.

2 MR. JORDAN: Your Honor, I've got to object to the  
3 witness just popping in and asking if he can make a comment.

4 We have had that at extraordinary length so far,  
5 but it's always been in answer to some sort of question.  
6 Couldn't we get this on redirect?

7 (Bench conference.)

8 JUDGE BECHHOEFER: At this point I would like to  
9 hear what Dr. Broom has to say.

10 MR. JORDAN: Fine.

11 WITNESS BROOM: Thank you, Judge Bechhoefer.

12 I was simply going to offer the following:

13 I believe the concern as to whether we properly  
14 and fairly compensate QA/QC personnel versus other parts of  
15 the organization, and if that is a concern, I have a few  
16 comments that might help in understanding whether we do or  
17 whether we do not.

18 I'd like to offer these:

19 First, the QC inspector at the jobsite is paid,  
20 I believe, 25 cents an hour more than a comparable journeyman  
21 in the craft, and the theory for that -- and that is not  
22 universally found in the industry, I might add -- but our theory  
23 for that is that the inspector deals with a level of construction  
24 personnel somewhere between a construction workers, the  
25 journeyman worker, and the leadman, and so we try to make that

7-9 1 comparable with about that lead level.

2 Our hourly wage structure reflects that kind of  
3 comparisons up to what we call our superintendents in the  
4 field.

5 The superintendent is a salaried employee. He  
6 does not earn an hourly wage. The superintendents in  
7 construction and the superintendents over the disciplines in  
8 QA/QC make exactly the same amount of money.

9 When we get above that level and we start into  
10 managerial positions, such as project manager, such as officers  
11 or general managers or staff managers, we have a real problem  
12 in comparing individual salaries.

13 First of all, I have a problem in releasing any-  
14 body's personal salary figures because I think that's a matter  
15 of some privacy to the individual, but be that as it may, when  
16 we look at comparisons of individuals who are in various  
17 positions in a management organization there are a number of  
18 factors which influence what that individual is being paid;  
19 his years of experience, the basis on which he has performed,  
20 how much it cost to get him.

21 In some cases if somebody resigns, we've got to  
22 fill a position, we're faced with competition in the market-  
23 place, and we have to pay what the traffic demands, and so  
24 there can be perturbations in what is normally a fairly  
25 comparable situation in terms of compensation, as is evidenced



7-10 1 by our salary ranges.

2 We have salary ranges for a number of employees.  
3 We don't have any problem giving that information to anyone.  
4 I'll be glad to bring that here if that would help.

5 And that shows that people in comparable positions  
6 have comparable salary ranges.

7 Now, of course, if the question is yes, but do you  
8 always put these fellows in at the top of the level and somebody,  
9 this position over here always goes to the bottom part of the  
10 level, I can't answer that.

11 You have to look at the individual circumstances  
12 surrounding each individual employee. But if the salary ranges  
13 for positions would be of use, benefit, we'd be happy to make  
14 that available.

15 (Bench conference.)

16 - - -

17

18

19

20

21

22

23

24

25

1 JUDGE LAMB: Could I ask you, Dr. Broom, to pursue  
2 that question a little bit farther to the point of describing  
3 the relationship or lack of relationship between the positions  
4 and salaries of two individuals and the people, or the line of  
5 reporting of those individuals from a point of view of their  
6 independence from each other.

7 WITNESS BROOM: Judge Lamb, I'm not sure I  
8 understand your question, but let me try.

9 JUDGE LAMB: What I'm concerned with has to do  
10 with the QA/QC personnel having equal access to upper levels  
11 of management and independent from scheduling and costs.

12 Is this something which goes with the level of  
13 reporting or the position slot in the organization, or the  
14 salary, or are all of these tied together?

15 In other words, does the fact that two people  
16 report to the same individual, in this case perhaps yourself,  
17 mean that they have the same positions in the organizational  
18 structure and the same salary and so on; can you distinguish  
19 between them?

20 WITNESS BROOM: Yes, sir. In my opinion, the  
21 compensation of two people who report to me has absolutely  
22 nothing whatsoever to do with their access to me.

23 It doesn't have anything to do with the amount of  
24 weight I give what one person tells me versus another.

25 It does not have anything to do with my making

7-12 1 myself available to the people that report to me.

2 I think if that's not the case you have a manager  
3 who's not doing his job.

4 The compensation of an individual is a reflection  
5 of responsibility, it's a reflection of his own years of  
6 experience, as well as the market conditions, as we're all  
7 painfully aware.

8 I have never had two individuals come to me, one  
9 with a QA opinion of the subject, and another with a cost or  
10 schedule concern, that were in conflict.

11 I have never had somebody bring me a problem where  
12 they wanted to cut the QA corners to try to save money or try  
13 to avoid meeting requirements.

14 I've had people come to me with an honest dispute  
15 about what is required, what was the code really say here, what  
16 are our commitments under the PSAR, those type arguments, but  
17 I've never had anybody say, "We don't want to do that because  
18 it costs too much money."

19 I don't believe Mr. Grote would -- has ever done  
20 that. He's certainly never done that to me, and I don't  
21 believe he would even consider doing that.

22 Is he concerned about cost and schedule? Certainly  
23 he's concerned about it, but he recognizes as well as anybody  
24 else our responsibility is to meet quality requirements.

25 I'm not sure that's a full answer in response to

7-13  
1 your question, but that's the only way I know how to describe it.

2 In having different people report to you, you must  
3 recognize what their responsibilities are, and you must provide  
4 access to those individuals as they need it.

5 JUDGE LAMB: Thank you. That's the type of  
6 information I was looking for.

7 JUDGE BECHHOEFER: I have one further question,  
8 though. Would the ranges of the -- ranges of compensation  
9 which you've just talked about for various positions have any  
10 bearing upon the quality of the individual who is actually  
11 recruited?

12 WITNESS BROOM: Certainly.

13 The position within that range that represents the  
14 salary that you offer to the man obviously is reflective of the  
15 quality of that individual.

16 Is that the question you asked?

17 JUDGE BECHHOEFER: Yes.

18 WITNESS BROOM: We don't change salary ranges to  
19 fit the individual, is what I was trying to say.

20 JUDGE BECHHOEFER: Okay. With respect to the  
21 objection before us, we will sustain it as to the specific  
22 individuals, but we would like those ranges that Dr. Broom  
23 talke about.

24 WITNESS BROOM: We'll be happy to provide those  
25 for you.

7-14

1 JUDGE BECHHOEFER: All right. Thank you.

2 MR. JORDAN: Then I'm a little confused because I  
3 withdrew the question to which there was an objection about  
4 the specific salary figures, so I don't know what the objection  
5 is you just sustained.

6 MR. AXELRAD: The objection was to the request for  
7 a comparison between Geurts and Smith.

8 JUDGE BECHHOEFER: The objection was to Smith  
9 versus Geurts.

10 MR. JORDAN: Okay. Let me try another one.

11 BY MR. JORDAN:

12 Q. How about Smith versus what Mr. Vurpillat has  
13 identified as potential comparables which appear to be the  
14 engineering and construction managers? If that's the right  
15 term.

16 BY WITNESS BROOM:

17 A. I don't --

18 MR. AXELRAD: Mr. Chairman, I object again. I  
19 thought what we were going to provide was salary ranges, and  
20 that that would not then require any further comparison between  
21 individuals, because, as Dr. Broom has pointed out, where an  
22 individual would be within the salary range for his position is  
23 dependent upon a lot of other factors which have nothing to do  
24 with the matters before this Board.

25 JUDGE BECHHOEFER: Right. Well, that was what the

7-15

1 ruling was.

2 I guess it should be compensation ranges rather  
3 than salary, because --

4 MR. JORDAN: I'm sorry. I guess I didn't understand  
5 that that providing ranges was going to apply to those positions  
6 as well as to the sort of lower positions that Dr. Broom  
7 described.

8 Is it going to go all the way up to the South  
9 Texas Project vice-president and general manager? Where is it  
10 going to stop as we go up?

11 I think that's where it ought to go to, up to there  
12 on that side, and up to the quality assurance manager on the  
13 side underneath Mr. Vurpillat.

14 JUDGE BECHHOEFER: Well, Dr. Broom, what was your  
15 intent?

16 WITNESS BROOM: I'll be happy to make any and all  
17 of those ranges available.

18 The only problem that I have is we don't have a  
19 range for officers, so when we get to a vice-president, that  
20 does not have a specific range that I can supply, but everybody  
21 else we've been talking about, except that one slot, I believe,  
22 is covered by Manager 5, 4, 3, 2, 1, engineers, various other  
23 type skill levels that have salary ranges associated with them.

24 JUDGE BECHHOEFER: Thank you.

25 / / /

7-16 1 BY MR. JORDAN:

2 Q Then if I can just follow that, I gather that a  
3 vice-president would be higher than the top of that chart?

4 BY WITNESS BROOM:

5 A Not necessarily. We have officers of the company  
6 who are paid less than the top of some of the ranges that you  
7 will see.

8 I know because I've had some personal experience  
9 in that regard.

10 (Laughter.)

11 MR. JORDAN: Well, I think we should have a  
12 comparable somehow, whether it's range or -- he can provide it  
13 for a general range.

14 MR. REIS: Mr. Chairman, I think what is offered  
15 now is quite understandable, and I think that would serve the  
16 purpose of this hearing. I think this offer is fine, although  
17 before I said we should get some indication because it is  
18 probative. I think giving the salary ranges would give it --

19 Can I ask one thing? Are there grades, are there  
20 steps in the organization, or managers have a Step 5 and  
21 superintendents have a Step 4?

22 WITNESS BROOM: Yes, there are, specifically in  
23 managers. There are five levels of managers, and each one has  
24 a salary range, and as you can imagine, their steps overlaps  
25 as in the GS levels in the Government.

7-17 1 MR. REIS: That's what I wanted.

2 JUDGE BECHHOEFER: Dr. Broom, is there any way  
3 to relate the compensation of that one officer to other  
4 officers in the corporation that --

5 We agree that the specific salary or the actual  
6 compensation has so many variables that we don't think it's  
7 relevant to what we have to consider, but would there be any  
8 measure that could relate that one slot to some other jobs in  
9 the company? That would be meaningful, is what I'm saying.

10 WITNESS BROOM: I can't think of a way specifically  
11 right now, but I believe if you give me some time to think  
12 about it I believe I can come up with something that will get  
13 you the kind of comparison for that slot that you want.

14 What I have in mind is, without disclosing  
15 Mr. Geurts' specific dollar salary, I think I can bracket his  
16 salary plus the range over which we are expecting to be able  
17 to fill this slot, and we're currently in the marketplace.

18 I believe I can come up with -- it won't be a  
19 company official's salary range, but it will certainly be a  
20 power group salary range that we're working in right now to  
21 fill that slot.

22 I would suggest that I submit that and at least  
23 have you look at that and see if that satisfies your require-  
24 ments as a starter.

25 JUDGE BECHHOEFER: Right. I think that would.



1 MR. JORDAN: That would satisfy me.

2 JUDGE BECHHOEFER: Fine.

3 MR. AXELRAD: Mr. Chairman, I might just add one  
4 thing. I haven't had a chance to discuss this particular  
5 subject with the witness and I'm not sure whether the types  
6 of offers he has made include any information which might be  
7 proprietary, and I would assume that when he has a chance to  
8 develop his material if it turns out that any is proprietary  
9 that we'll be able to make adequate protection for it as  
10 necessary.

11 JUDGE BECHHOEFER: Yes. Of course.

12 (Bench conference.)

13 JUDGE BECHHOEFER: I think it's late enough that we  
14 ought to break for lunch.

15 Is this an appropriate place?

16 MR. JORDAN: This is fine.

17 JUDGE BECHHOEFER: Okay, about an hour and fifteen  
18 minutes.

19 (Whereupon, at 12:45 p.m., a recess was taken  
20 until 2:15 p.m., the same day.)

21 - - -

## AFTERNOON SESSION

2:15 p.m.

1 JUDGE BECHHOEFER: We have decided that the  
2 two sessions in September will be held right here, taking  
3 into account mostly the convenience of the access to other  
4 areas and the amount of time it takes. That will be from  
5 September 15 through 18th, and September 29th to October  
6 2nd. All of those sessions except the last one will be  
7 held in this room. The last one will be held in Room  
8 801 which is up on the fourth floor. It's very small,  
9 but we'll squeeze in there one day. We can still use  
10 the storage facilities for our documents and that type  
11 of thing. What we propose to do is to adjourn the Friday  
12 sessions on those dates by about 3:00 o'clock. We may  
13 shorten the lunch period and just eat sandwiches downstairs  
14 or something like that on those days.

15 Before we resume, are there any other preliminary  
16 type matters?

17 (No response.)

18  
19 JUDGE BECHHOEFER: Mr. Jordan, you may resume.

20 MR. JORDAN: Thank you.

21 BY MR. JORDAN:

22 Q Dr. Broom, turn to 20 of your testimony. At  
23 line 25, you refer to a task force which appears to have  
24 been established in order to clarify the meaning and intent  
25 of various terms. Were there particular incidents that

1 led to the establishment of that task force, or was that  
2 the general idea somebody had?

3 BY WITNESS BROOM:

4 A Mr. Jordan, I'm sure there were instances  
5 that brought these instances to mind, but in general,  
6 these are problems of a general nature that I believe  
7 had been arisen in several instances, a confusion, need  
8 to clarify these matters, and while they may sound very  
9 simple in reading, when you attempt to clarify criteria  
10 that seem as "simple," as "flat," and "no standing water,"  
11 it turns out not to be quite so simple. I believe that  
12 Mr. Frazar referred in his testimony earlier to this area  
13 and that there was a considerable effort expended in this area,  
14 and agreements were reached for specification of the interpre-  
15 tation of these type terms were made.

16 Q Your testimony, then, is that, it sounds to me,  
17 like there was a generally recognized need to do some of this  
18 clarification, that it wasn't in response to some particular  
19 specific incidents, but through a generalized needs that you  
20 had recognized over time?

21 BY WITNESS BROOM:

22 A Yes. If I can expand just a bit, as an example,  
23 "no free-standing water in concrete form." We would hope that  
24 that term could be used with some degree of judgment by the  
25 inspection and construction personnel since prior to placing the

1 concrete, you must have a wet surface but a surface without  
2 free-standing water on it, and that's very difficult to  
3 literally achieve. And, in general, an engineer would hope  
4 that that type of interpretation could be made with some  
5 judgment on the job. That's an example of a criteria that  
6 leads to confusion and disputes and disagreements and there  
7 is a small pool of water: how big can it be before it's of  
8 significance, how deep is it -- you can't tell if you're  
9 six feet above it. When you get into the literal application  
10 of trying to judge whether those type criteria are met, it was  
11 necessary to clarify.

12 What I'm saying is, those are well-known problems  
13 that, I think, in the industry have been faced for many years  
14 and on this project we had to face them. We had tried ways  
15 to solve those problems. We had tried, as I said just now,  
16 to rely on judgment, and it had not worked satisfactorily.

17 There may have been an incident or two that  
18 precipitated the formation of this task force. I don't  
19 recall a specific incident, but there may very well have been.

20 Q A few questions that I need to ask to help under-  
21 stand exactly what you're talking about.

22 Page 22, answer 24, this is actually a couple of  
23 pages, with respect to -- the question is, "Describe HL&P's  
24 involvement in the development and review of B&R's STP  
25 quality program." My question is whether your description in

1 here of HL&P involvement applies as it appears to me to  
2 apply to the time from the beginning of the project through  
3 today.

4 BY WITNESS BROOM:

5 A Mr. Jordan, in reviewing this answer, it seems to  
6 me that I begin by talking about the actions that HL&P  
7 participated in in the early phase of the job and then later  
8 on how they reviewed procedures as they were modified and  
9 then the type of things that they are involved in routinely  
10 in in this job in the stage it is in today. I'm not sure I  
11 understand your question.

12 Q Well, let me give you some examples. I recognize  
13 that some of them clearly relate to the very earliest stages.  
14 As I say, let me give you some examples:

15 You say, on page 23, line 16, the following:  
16 "There is a continuing dialog on nearly a daily basis between  
17 HL&P's STP QA manager and B&R's project personnel." That  
18 is stated in the present. My question is whether that is  
19 intended as a description only of what happens today, or if  
20 that is something that is intended as a description of what  
21 has happened throughout. That's where my confusion comes into  
22 it, because it looks like it could be -- and to me it looks  
23 like it's probably both?

24 BY WITNESS BROOM:

25 A I'm not certain that the title, "STP QA manager,"

1 was appropriate for the HL&P employee heading up that group in  
2 the early phases of the project. But, if you will forgive that  
3 possible change in titles, I think that it's fairly safe to say  
4 that on normally a daily basis, there has been contact between  
5 their manager, whatever title, responsible for their QA program  
6 for the project, and our personnel since the job started, and  
7 there is certainly that today.

8 Q. To give another example, the first sentence of the  
9 following paragraph says, "Our standard practice at B&R on the  
10 STP has been to keep HL&P fully informed of all activities  
11 and problems as they arise on the project." I gather that  
12 applies throughout, from the beginning to today?

13 BY WITNESS BROOM:

14 A. We have attempted to keep HL&P fully informed of  
15 our activities. I suppose, as you would imagine, as the  
16 project has increased in activity and intensity and numbers  
17 of people, and obviously since the show cause order and the  
18 actions we've taken there, the amount of information and  
19 contacts are probably more frequent and may be more comprehensive  
20 today than they were in the past, but certainly it has been our  
21 intent, since the start of the job, to keep HL&P fully informed.

22 Q. On page 24, line 13, and -- it says, "A number  
23 of deficiencies concerning implementation of procedures were  
24 discovered." This relates to the period of December '75 into  
25 early 1980 and to the performance of QA. My question is,

5-6  
1 what is the deficiencies concerning implementation of procedures  
2 there? It looks to me as if you're talking about QA having  
3 discovered deficiencies in the implementation of construction  
4 procedures, is that correct?

5 BY WITNESS BROOM:

6 A No, I did not intend to restrict my remark to just  
7 that. That is certainly a big part of it, but we've detected  
8 deficiencies in the QA procedures, and in their implementation  
9 by the QA/QC personnel as well as discrepancies in material as  
10 well as in performance of construction work by construction  
11 personnel. There have been a broad range of deficiencies of  
12 all types that have been discovered throughout the history of  
13 the program.

14 Q In effect, then, I guess that's deficiencies across  
15 the full range of procedures that would have been reviewed by  
16 the QA program?

17 BY WITNESS BROOM:

18 A Yes, any type of documentation of deficiencies  
19 through audits, through our NCR or DDR process.

20 JUDGE BECHHOEFER: Dr. Broom, should the word  
21 "concerning" really be something like "involving"?

22 WITNESS BROOM: Perhaps that would be a better word,  
23 "involving implementations of procedures." Perhaps that's the  
24 better term.

25

JUDGE BECHHOEFER: All right.

BY MR. JORDAN:

Q Moving to page 26, Doctor, you're discussing here the concrete problems, voids and the entire subject, and on lines 12 to 14, you say, "This is not an uncommon occurrence in placing concrete in situations such as I have described."

What is it that is not an uncommon occurrence?

BY WITNESS BROOM:

A Oh, you want to know the antecedent of "this"?

Q I want to know specifically -- yes, the antecedent of "this".

BY WITNESS BROOM:

A The types of problems I state in the placement of concrete in the areas of extreme rebar congestion, steps were taken to avoid the creation of voids. Unfortunately due to the configuration, some voids did occur. The -- I'm referring to the fact that in placing concrete with these types of characteristics of extreme congestion of rebar and configuration, it is not uncommon to have voids.

Q So, your testimony simply is that it is not uncommon to have voids in that kind of concrete pour?

BY WITNESS BROOM:

A That is correct.

Q I gather, then, that it is not your testimony -- and correct me if I'm wrong -- it is not your testimony that



1 the extent of voids occurring at the South Texas Project is  
2 not uncommon?

3 BY WITNESS BROOM:

4 A Mr. Jordan, I don't really know that I can answer  
5 that question. I don't know that I have enough specific data  
6 to draw a comparison on numbers of nuclear plants and I don't  
7 know how you would make that kind of determination. Percentages  
8 of concrete involved in a void, the frequency of occurrences  
9 of voids in general -- I guess what I'm trying to say is,  
10 to my knowledge, there were two areas of voids, basically, in  
11 the containment wall, both associated with extreme congestion,  
12 and one area of voids in the floor of the fuel pool underneath  
13 that area, again, associate with areas where it was difficult  
14 to vibrate, and I don't think that that is an uncommon type  
15 of problem to encounter.

16 I can't tell you whether on any kind of percentage  
17 or comparative basis whether that's -- how that would compare  
18 with other nuclear power plant projects. I do know that there  
19 have been voiding problems at other projects, but I don't have  
20 specific enough detail to give you a quantitative comparison,  
21 if that's what you're looking for.

22 Q I just wanted to get it clear on what you were  
23 talking about as being uncommon.

24 BY WITNESS BROOM:

25 A My friend here has --

1 Q Mr. Vurpillat, do you --

2 BY WITNESS BROOM:

3 A -- some extensive concrete experience. He might  
4 be able to expand upon that.

5 BY WITNESS VURPILLAT:

6 A Mr. Jordan, it's been my experience on several of  
7 the nuclear jobs that I've been involved in have had concrete  
8 voids in areas described by Dr. Broom in his testimony that were  
9 as significant as the voids discovered at South Texas.  
10 In all cases, as in the case of South Texas, the voids were  
11 discovered and they were repaired.

12 Minor voiding in congested areas like this happen  
13 on -- have happened, in my experience, anyway, on every job,  
14 nuclear or not. And by minor, I mean large but not --.

15 JUDGE LAMB: Could I break in with a question on  
16 that?

17 MR. JORDAN: Please do.

18 JUDGE LAMB: To what extent, if any, do either of  
19 you gentlemen -- or both of you -- to what extent, if any,  
20 could that be attributed to design error in selecting the  
21 thickness of walls and placement of the rebar and so on?

22 BY WITNESS BROOM:

23 A I'll answer that, Judge Lamb, by my opinion, and  
24 I think some evidence in our particular case on South Texas,  
25 that I'm not sure I would call it design error, but rather the

1 creation of a design that does not appreciate a problem which  
2 would be posed for the construction forces trying to implement  
3 the design.

4 I'm not sure that's very clear. Let me try it  
5 again. That is, the design, if it were constructed properly,  
6 would certainly be adequate, but that the specific case I have  
7 in mind is the positioning of a lateral reinforcement member  
8 near the lower part of a concrete pour, a very difficult area  
9 to get vibration and consolidation of material under, if that  
10 spacer or that stiffener can be moved near the top, where the  
11 access to that area with vibrators is much easier, then I  
12 think we would all agree that's a better design. It's certainly  
13 easier to place and it's easier to achieve consolidation. That,  
14 in fact, occurred in our design and in our placement experiences  
15 here on South Texas, and we made that change in repositioning  
16 the break in the lifts so that we could avoid that specific  
17 problem, and I think that was a distinct improvement in our  
18 trying to place the further pours in the concrete containment  
19 wall. But, it is certainly clear that if the engineer does not  
20 adequately and thoroughly consider the constructability of his  
21 design, or if constructability reviews are not adequately  
22 provided for by construction forces, these kinds of problems  
23 can be created, and the situation can be created where it's  
24 a very difficult placement.

25 We do that kind of thing. We have reviews of our

1 designs for constructability. We have our engineering people  
2 informed of construction problems, and we try to eliminate this  
3 kind of thing. We didn't eliminate it in this case.

4 JUDGE LAMB: That's the kind of information I  
5 wanted.

6 Mr. Vurpillat, did you have any additional thoughts  
7 on that?

8 WITNESS VURPILLAT: Well, I agree with what  
9 Dr. Broom said about design. If part of the design, for instance,  
10 is the location of construction joints --

11 JUDGE LAMB: Um-hum.

12 WITNESS VURPILLAT: -- often it is and sometimes it  
13 isn't, then the location of the construction joint is critical.  
14 For instance, pouring an L-shaped section is extremely difficult  
15 if the congestion is severe, the congestion of rebar.

16 If you place a construction joint in such a way that  
17 you end up with two rectangles, one vertical and one horizontal  
18 instead of an L, then you're much better off. The location of  
19 the construction joint, as it relates to design, is a most  
20 important factor. Often that's a construction choice and you  
21 have to be very careful.

22 A ten-foot lift in a congested area is much more  
23 difficult to place than a five-foot. Sometimes you have to  
24 go into shallower lifts. So, all those things have to be  
25 considered.

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554 2345

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

WITNESS BROOM: By the way, I should add one comment. In the use of the term design, I was thinking about engineering in the broadest sense. In my specific problem I cited at South Texas, I believe our selection of the elevations for the lifts were the field engineers' selections, not the design engineers', but nevertheless, it was a selection of the positioning of the lifts that could have been done better.

JUDGE LAMB: Thank you.

JUDGE BECHHOEFER: I would like one follow-on.

You mentioned that voids in situations such as we have been talking about are not an uncommon occurrence. If that's the case, is there not -- would there not be some reason to take extra steps to see that such voids don't occur; or, alternatively, would you just rely on picking up such voids as did occur and correcting them?

It's really two approaches, and I would like to see how you would approach that.

WITNESS BROOM: Judge Broom, I would very much like to have Mr. Vurpillat comment on that due to his experience in the field, but I would like to just --

JUDGE BECHHOEFER: I would like to hear both of you on that.

WITNESS BROOM: -- express my opinion.

Certainly we need to do both. We need to try to prevent the voids in concrete, and we certainly should recognize  
ALDERSON REPORTING COMPANY, INC.

1 that before the fact.

2 Secondly, we should have a program to be very  
3 particular about finding them if they do occur and repairing  
4 them. But, I don't know how to describe the congestion of  
5 rebar imbeds, tendon sheaths, penetrations, and all the other  
6 steel that the engineers decide have to go into containment and  
7 shield walls.

8 Unless you've just actually been there and looked  
9 at it, the steel in the form where the concrete is going to be  
10 poured, in some cases, you can't see through it. The light  
11 can't go through it. I'm not a concrete man. In my opinion,  
12 I would have to pour water to get it in there. And to place  
13 high strength concrete in those situations -- I'm not trying  
14 to make light of the problem at all. What I am trying to say  
15 is that with the very best of planning and being very careful,  
16 and very careful inspection afterwards, I still am not  
17 surprised that some degree of voiding will occur.

18 I'm not trying to excuse the voids in the contain-  
19 ment at South Texas. I think in some cases down there certainly  
20 we could have done a better job. You know, we may have had a  
21 concrete pump go down and didn't have adequate plans to have a  
22 back up or better inspection of vibration in a certain area.  
23 I'm not trying to say we did a perfect job, by any means, but  
24 I am trying to say that by and large, the complexity of those  
25 concrete pours are such that it will be very difficult to

1 avoid some voids.

2 JUDGE BECHHOEFER: Mr. Vurpillat, would you like to  
3 add something?

4 WITNESS VURPILLAT: Yes. The planning regarding  
5 these congested pours is most critical, and it can go anywhere  
6 from modeling -- modeling the pour to a thorough conversation  
7 of the planning, to mockups. And it normally happens, or has  
8 been my experience anyway, that in the most congested areas,  
9 where you expect the most trouble, you don't have trouble, because  
10 you plan very thoroughly.

11 It's in the areas that don't quite fall into that  
12 category that you often have the problems, and I don't know,  
13 for instance, which one of those categories the voiding -- the  
14 pours and the voiding at South Texas took place. I wasn't  
15 here on the project at that time. I don't know. I'm just  
16 saying that generally.

17 The planning is the answer to avoiding these to the  
18 greatest extent possible, but there are times that when in  
19 spite of the planning the congestion in some of these pours  
20 is -- it's just almost impossible to avoid voiding and so you  
21 have to have a program of finding those voids, at least the  
22 major ones, and repairing them. The design takes some of this  
23 into account, but you need both. You need a good deal of  
24 planning and a good detection.

25 JUDGE BECHHOEFER: Would your organization normally

1 try to plan or do a sufficient amount of planning taking into  
2 account the configuration or the type of area where, for instance,  
3 you need to pour concrete? I take it the planning would?

4 WITNESS VURPILLAT: Well, I can't testify as to  
5 what happened in 1978 or '79, but --

6 JUDGE BECHHOEFER: Well, how about now?

7 WITNESS VURPILLAT: -- but that type of planning  
8 is certainly ongoing now. It is a standard feature of planning  
9 every concrete pour, complex pour anyway, safety-related pour,  
10 on that job, and that sort of planning does take place.

11 JUDGE BECHHOEFER: Fine. Thank you.

12

13

14

15

16

17

18

19

20

21

22

23

24

25

----



gmw

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

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

JUDGE BECHHOEFER: You may go ahead.

WITNESS VURPILLAT: I might add one other thing. It all adds up, also. You've got -- If it is difficult to place, it is difficult to inspect, and so both parties are -- both people -- You like to have vibrator operators, for instance, at the place where the concrete is being placed, and because of some of the congestion of the reinforcing steel, you can't get them there, and you can't get the inspectors there. You cut inspection ports in the forms. You cut vibration ports in the forms. There are difficult placements --

JUDGE BECHHOEFER: I assume --

WITNESS VURPILLAT: -- but not impossible.

JUDGE BECHHOEFER: Yeah. Is there some method for inspecting all of these areas?

WITNESS VURPILLAT: Yes. Certainly. It is difficult. It is tough on the construction people, I mean physically tough on the construction people, and it is physically tough in many cases on the inspectors to get in a position to adequately inspect. But it happens. It is not impossible, and they do do it.

JUDGE BECHHOEFER: Some provision is made for inspecting.

WITNESS VURPILLAT: Oh, yes. Oh, absolutely. There's no provision for not inspecting.

1 JUDGE BECHHOEFER: Right.

2 Thank you.

3 BY MR. JORDAN:

4 Q Mr. Vurpillat, the plants that you were familiar  
5 with that had concrete voiding problems as extensive as STP,  
6 what are those plants?

7 BY WITNESS VURPILLAT:

8 A Three Mile Island Unit 1, WNP, that's WPPS  
9 Project No. 1, Salem, and I'm not sure whether it was Unit 1  
10 or Unit 2 but Salem.

11 Those are three that come to mind. And there  
12 was a significant amount of voiding that I'm aware of, not on  
13 a project that United Engineers was connected with but that I  
14 was personally connected with in a consulting capacity,  
15 Crystal River III had that type of situation.

16 Those come to mind.

17 Q In those cases, as I think you've testified,  
18 the voids were found in the course of the construction and  
19 the quality assurance work, and they were corrected, correct?

20 BY WITNESS VURPILLAT:

21 A That's correct.

22 Q Dr. Broom, at page 29 to 31 you note -- First,  
23 I'll add, you note that individuals involved in falsifying  
24 documents were fired, correct?

25

1 BY WITNESS BROOM:

2 A I'm sorry. I didn't hear what you said. Do  
3 I know if individuals --

4 Q Did you note that?

5 BY WITNESS BROOM:

6 A Oh. That individuals involved in falsifying  
7 documents were fired. Was that the word you used?

8 Q Yes.

9 BY WITNESS BROOM:

10 A Fired? Yes. I believe that's correct.

11 Q Okay. So far as you know, has everyone who  
12 has been responsible for falsifying documents who was working  
13 for Brown & Root on the STP Project been fired?

14 BY WITNESS BROOM:

15 A Mr. Jordan, I have to answer that this way.  
16 The answer is yes. However, in each case where we have an  
17 allegation or for whatever reason an incident or occasion  
18 comes to the surface involving a potential falsification  
19 charge, our personnel look into that matter, and depending  
20 upon what we find, yes.

21 If a person is willfully falsifying records,  
22 they are terminated. I remember one incident, I believe,  
23 where a fellow was kept on the payroll for some fairly short  
24 period of time after volunteering that he had made one mistake.  
25 He had written something down and put the wrong date by it,

1 and it was the only time he had ever done it. And I believe  
2 our QA project manager put him on probation for a few days or  
3 a few weeks -- I don't really recall -- and in reviewing  
4 that situation determined that it may have happened on another  
5 occasion, and at which time he was terminated.

6 There may have been other cases where more  
7 than one person were involved, and to some people it may seem  
8 that an individual was willfully falsifying documents. To  
9 another person it may seem that the person didn't properly  
10 understand what he was supposed to be doing.

11 I can't say in cases like that we fired everyone  
12 that we determined there may have been some justification,  
13 and I guess what I'm really saying, we concluded it was not  
14 true falsification. But I believe every time we've found a  
15 situation where we think falsification occurred the man was  
16 terminated.

17 Q You mentioned, and I wasn't clear, situations  
18 in which more than one person would have -- might have been  
19 involved.

20 Were you referring to a single specific incident  
21 or some number of identifiable incidents or speaking in general?

22 BY WITNESS BROOM:

23 A I don't have one specific incident in mind right  
24 now, but I'm sure that may have occurred in some investigations.

25 Falsification. Yes. I can refer to a specific

1 instance, if you would like for me to.

2 Q If this is the instance you were referring to  
3 in saying --

4 BY WITNESS BROOM:

5 A I was speaking generally at that time.

6 Q You were.

7 Why don't you go ahead and refer to the specific  
8 incident and explain that.

9 BY WITNESS BROOM:

10 A As an example of what I was talking about  
11 is the investigation referenced as 80-21, I believe, involving  
12 records kept by permanent plant maintenance personnel. And  
13 in summary, I think we found that a foreman in that case was,  
14 in my opinion, probably not deliberately falsifying documents  
15 but certainly was creating incorrectly records, and he was  
16 terminated.

17 There was a question that whether some of his  
18 supervision were knowledgeable of what was going on under his  
19 control and condoned that activity, and we investigated that.  
20 And we did not find that to be the case. We did transfer some  
21 people to some other positions. But I believe there were people  
22 involved in that situation that were not terminated, because  
23 we did not believe they had deliberately participated in any  
24 falsification attempt.

25 That's the kind of thing I was referring to.

1 Q I'd like to go to page 31 to the discussion  
2 of the investigation of the Swayze incident.

3 I'm really only going to get into this very  
4 briefly myself. But I would like some information about it.

5 You say a comprehensive investigation was  
6 undertaken.

7 Could you tell us who were the Brown & Root  
8 individuals who did the investigation?

9 BY WITNESS BROOM:

10 A Mr. William A. Brown, who is a member of our  
11 legal department.

12 Mr. Tom Gamon, whom I've identified earlier as  
13 a QA manager at the time, not the project QA manager but the  
14 group QA manager.

15 And I believe Mr. Larry Ashley participated  
16 in some or most of those investigations.

17 As I recall, those were the three people who  
18 conducted that investigation.

19 Q When you say "conducted that investigation,"  
20 that means that they did the actual interviews that were  
21 involved in the investigation?

22 BY WITNESS BROOM:

23 A Yes.

24 Q Whom did they interview?  
25

1 BY WITNESS BROOM:

2 A They interviewed QC inspection personnel who  
3 had worked with Mr. Swayze that I specifically remember;  
4 perhaps others in the QA department.

5 They interviewed --

6 Q You -- I'm sorry. I don't mean to break you up.  
7 But when you say you specifically remember, do you have names,  
8 recall names of the QC inspector?

9 You said QC inspection personnel. Do you mean  
10 QC inspectors?

11 BY WITNESS BROOM:

12 A Yes.

13 Q Who --

14 BY WITNESS BROOM:

15 A And supervisory personnel in the QC organization.

16 Q Both inspectors and supervisors?

17 BY WITNESS BROOM:

18 A Yes. I believe that's correct.

19 Q Could you tell us as many names as you remember  
20 and also tell us if there are any you don't remember?

21 BY WITNESS BROOM:

22 A I remember Mr. Singleton was interviewed.

23 (Pause.)

24 I have a number of names that I think -- I  
25 reviewed that information fairly recently, but I'm not

1 comfortable with giving you names. I'd be happy to check that  
2 later.

3 I can't say specifically the names of other  
4 individuals interviewed, although I do know there were a  
5 number.

6 I did not respond to your question fully.

7 Q That's right. I wanted --

8 BY WITNESS BROOM:

9 A Construction personnel were interviewed, and  
10 the specific people talked to there I'm not sure of but I  
11 could check those individuals.

12 And, of course, Mr. Gwayze and Mr. Fraley.

13 I guess what I'm really trying to say is I  
14 believe they went to the site and talked to everybody that  
15 had direct dealings on a routine basis with the people involved,  
16 trying to determine as best they could how both individuals  
17 had been behaving in their normal day-to-day performance of  
18 duties, as well as any knowledge that they might have had  
19 surrounding this alleged instance.

20 Q Okay. Did these three investigators file a  
21 written report?

22 BY WITNESS BROOM:

23 A No. Not to my knowledge. I know there were  
24 some depositions -- statements taken from the individuals.  
25 I know that these personnel met with Mr. Munisteri, who was



1 the group vice president at the time, and informed him of the  
2 progress of their investigation. That may have been done  
3 verbally.

4 I don't recall seeing a specific report that  
5 summarizes the investigation that I'm referring to.

6 Q Did these -- What was your position at the  
7 time that this incident occurred and the investigation was  
8 reported?

9 BY WITNESS BROOM:

10 A I was a vice president of engineering.

11 Q So this report was not made to you?

12 BY WITNESS BROOM:

13 A No.

14 Q You were not involved in -- In fact, you were  
15 not involved in the process at all, were you?

16 BY WITNESS BROOM:

17 A No. I was not personally involved during that  
18 time frame.

19 I've discussed that situation with the people  
20 who did participate in it, but I was not personally involved  
21 in it.

22 Q You refer on page 33 to a number of people,  
23 particularly investigators whom I gather Mr. Swayze alleged  
24 to have been playing cards.

25 Are those the people whose names you will check

1 on as you just said, or can you identify them?

2 BY WITNESS BROOM:

3 A I'll identify those personnel if you'll give  
4 me just a moment.

5 (Pause.)

6 Your question was to identify the persons  
7 that Mr. Swayze alleged to have played cards?

8 Q Yes.

9 BY WITNESS BROOM:

10 A You'll have to tell me on which occasion you  
11 are referring to. He made separate allegations of different  
12 individuals playing cards on three or four different occasions.

13 Q Since you seem to be aware of that, I'll simply  
14 ask you to tell us the individuals' names for each occasion.

15 BY WITNESS BROOM:

16 A The first time in March of 1979, I believe  
17 that Mr. Swayze stated that there were seven to eight people  
18 involved in playing card games, and I believe that he named  
19 Mr. Lezear --

20 Q Could you spell that?

21 BY WITNESS BROOM:

22 A L-a-z-e-a-r, I believe is his spelling.  
23 Mr. Narron, N-a-r-r-o-n, Mr. Duke, and a  
24 Mr. Wilson.

25 He may have named others, but I'm not aware of

1 any other names that he gave at that time.

2 In December of 1979, he named a Mr. Crisp,  
3 a Mr. Duke, a Mr. Fortay, Mr. Hammons, H-a-m-m-o-n-s, a  
4 Mr. Horton --

5 Q Horton?

6 BY WITNESS BROOM:

7 A H-o-r-t-o-n.

8 I'm sorry. The next one I can't pronounce.  
9 K-e-s-a-r-i-n-a-t-h, Kesarinath (pronouncing), I think is  
10 the pronunciation.

11 Mr. King --

12 Q King?

13 BY WITNESS BROOM:

14 A K-i-n-g.

15 A Mr. Lazear, a Mr. Pelingaris, P-e-l-i-n-g-a-r-i-s  
16 and a Mr. Shan, S-h-a-n.

17 You're after the names of the people that he  
18 alleged to have played cards, but the time frame has changed.

19 Q I'm really just after names. If he gave the  
20 same names another time, I'm not interested in that.

21 BY WITNESS BROOM:

22 A I don't mean that he gave other names at other  
23 times. I was simply referring to the fact that although he  
24 named different individuals, he also stated that card games  
25 occurred during a different time frame.

1 Q I see.

2 BY WITNESS BROOM:

3 A In May of -- I'm sorry. In March of 1980  
4 he identified a Mr. Duke, a Mr. Hammons, a Mr. Lazear,  
5 a Mr. Singleton, a Mr. Wilson.

6 And in June of 1980 he identified a Mr. Hammons,  
7 Mr. Singleton, Mr. Duke, Mr. Wilson, Mr. Crisp, Mr. Narron --  
8 That's N-a-r-r-o-n, again.

9 Mr. Jordan, I believe that the extent of my  
10 knowledge of the individuals that Mr. Swayze named on various --  
11 during various depositions or interviews or contacts that our  
12 company or HL&P had with him. There may have been other --

13 Q I gather you refreshed your recollection from  
14 a document. What is that document?

15 BY WITNESS BROOM:

16 A These are some notes that I made in the volume  
17 of the testimony from the Nuclear Regulatory Commission. I  
18 simply made some marginal notes in a copy of their testimony  
19 as opposed to my testimony.

20 Q There's a name mentioned of Mr. Warnick at the  
21 bottom of the page. I've had some problem with making sure  
22 if it was the same last name or the same person.

23 Is this Mr. Thomas Warnick?

24 BY WITNESS BROOM:

25 A I'm sorry. Which page are you on again?

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

Q That's page 33 of your testimony.

BY WITNESS BROOM:

A Yes, sir. That's Mr. Tom Warnick.

- - -

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

10-1  
STP  
lb

1 Q You say on page 36, in answer 31, that you,  
2 meaning Brown & Root, I take it, and top management were  
3 surprised and you were dismayed at the issuance of the show  
4 cause order. Were you similarly surprised and dismayed by the  
5 results of the I&E Inspection 79-19?

6 BY WITNESS BROOM:

7 A The results of 79-19 had begun to be conveyed to me  
8 in verbal fashion in December of 1979. I was very disappointed  
9 at those findings. When I say "I," I mean "we," all of the  
10 management team at Brown & Root. We took those findings very  
11 seriously. We mounted an allout program to implement corrective  
12 actions to all of those items as they were identified to us.  
13 In that sense, I was dismayed because any finding of any  
14 deficiency of our program, I'm not happy about. The number of  
15 the findings further dismayed me.

16 Although the NRC conducted an extremely extensive  
17 investigation, and I perhaps would have expected some findings,  
18 still, twenty-two items of noncompliance obviously have to  
19 concern me a great deal. So, I was -- I had been apprised,  
20 I believe, by the time the show cause order was issued, of most  
21 of the findings through information from HL&P through meetings  
22 that they were having, exit critiques, or I'm not exactly sure  
23 how you describe those meetings with the NRC inspection team.

24 That information that was contained in 79-19, then,  
25 really did not surprise me upon seeing the written document.

1 That information surprised me as it was broken to me. I was  
2 disturbed by it, I was concerned about it, as well as were  
3 Mr. Rice and all the other people in our management team.

4 I was really surprised when the show cause order  
5 was issued, however, because I had recognized the twenty-two  
6 items were found during the audit. I had further recognized  
7 that we had proposed corrective actions for most of those  
8 items to the NRC. Some of those were underway, and I had  
9 felt, in my mind, that while the twenty-two items of noncom-  
10 pliance were certainly serious and a matter that we certainly  
11 did not take lightly, I did not anticipate a show cause order  
12 being issued or fine imposed. And that is the meaning of my  
13 sentence when I say we were surprised and we were dismayed  
14 because we did not think the show cause order placed the program  
15 in complete perspective. I had thought that the actions that  
16 we had taken would be viewed by the NRC as a good faith  
17 action to start correcting that and that we probably would  
18 be required to have some meetings with NRC management, perhaps.  
19 I guess I really didn't think at the time about what might  
20 result, other than the issuance of the report with citation  
21 of these -- naming of these violations.

22 I did not anticipate a show cause order, and when  
23 it was issued, yes, it surprised me considerably.

24 Q Now, on page 37, in the paragraph, that last full  
25 paragraph on the page, you describe, or you discuss, directing

1 members of your staff and an outside consultant to conduct  
2 extensive interviews to determine whether there existed a  
3 perception of harassment or intimidation and then that you  
4 also mention that there was a written survey questionnaire,  
5 confidential, that was given to the construction and QC personnel.

6 I would like to ask you first about the interviews  
7 you directed to take place. First, who was the consultant that  
8 you had assisting you?

9 BY WITNESS BROOM:

10 A The consultant's name is Mr. Greg Howell. He is  
11 -- heads a firm, Time Lapse, Incorporated. We contracted with  
12 him individually. I guess our contract might have been with the  
13 firm, but basically we secured his services.

14 Q To assist you in preparing the interviews, or for  
15 what purpose?

16 BY WITNESS BROOM:

17 A To perform several functions. Perhaps, if I could  
18 back up just a moment, I was informed of the issue of intimidation  
19 and harassment. I'm not certain of the date, but I believe it  
20 was the last few days in December. This followed a meeting that  
21 Mr. Oprea had had in Arlington, I believe, with some members of  
22 the NRC staff a few days earlier. And this item was identified  
23 to us, to the members of Brown & Root management and I was given  
24 the assignment and marching orders from my boss, Mr. Rice, in  
25 no uncertain terms, that this particular issue was extremely



1 serious and that I was to devote my time and efforts to  
2 ensuring that we got to the bottom of this problem.

3 My first reaction was to call our personnel people  
4 and talk to them about the situation. We had, at the time,  
5 a member of the personnel staff who I felt would be helpful  
6 in these kinds of activities. The personnel people recommended  
7 Mr. Howell. I had not known Mr. Howell before, but he had done  
8 work with Brown & Root in some similar capacities, not directly  
9 of this nature before, and he was currently available.

10 He was available on short notice, and within just  
11 a matter of days, I had our assistant department personnel  
12 manager and Mr. Howell on the site performing a number of  
13 functions, and those functions were to conduct individual  
14 interviews with our personnel, to conduct interviews in groups  
15 and to determine a way that we could get anonymous responses  
16 from our people through a series of questions, basically to the  
17 question about what are your feelings about harassment,  
18 intimidation and any related questions.

19 Mr. Howell proposed that this be done by administering  
20 a questionnaire that would not be signed or identified and he  
21 developed such a questionnaire with the assistance of some of  
22 his associates and administered that questionnaire to all of  
23 the QA/QC people on the job, and all three of those activities  
24 preceded simultaneously the taking of these questionnaires, the  
25 group meetings and the individual meetings.

1 Mr. Howell basically received the following  
2 instructions from me, and that was to go to the site and  
3 clearly identify himself as not a Brown & Root employee, as a  
4 consultant that was retained to perform this function, and  
5 that anybody who talked to him in any capacity, I did not  
6 want identified, I did not want comments attributed to any  
7 individual. He was there to determine the attitudes and  
8 feelings of the people on the job site.

9 I took these actions, first of all, because we  
10 were very concerned about the NRC's findings. But, second,  
11 I really didn't know how else to proceed because, as you are  
12 aware, the NRC's interviews and all matters in this respect  
13 are of a confidential nature and they can communicate to us  
14 the substance of their findings, but they can't identify people  
15 to us, and I did not want to try to identify those -- I've  
16 forgotten the number, I'm sorry -- nine or ten or twelve or  
17 fifteen or whatever numbers in the Inspection Report 79-19,  
18 which we received later. I was not even aware of the number at  
19 the time, and so I believed that we had to approach it in a  
20 broad-based program to cover everyone.

21 I've left out construction. I don't remember the  
22 numbers, but included in those interviews and the contacts by  
23 both our man and Mr. Howell were quite a number of construction  
24 personnel. That's basically what Mr. Howell and what our  
25 representative conducted at the job site during January of 1980.

1 JUDGE BECHHOEFER: Dr. Broom, how was this  
2 consultant identified when he went on to decide to conduct  
3 the interviews? Was it just an anonymous person, or did he  
4 have a consultant hat on or did he say I'm working for Brown &  
5 Root or what?

6 WITNESS BROOM: I don't know what color hat he had  
7 on, but he was identified to our employees as a consultant that  
8 we had employed to investigate the morale, the attitudes of our  
9 people about construction pressures or attitudes about any  
10 complaints. It was a broad-scope charter on his part to determine  
11 the attitudes of our people on the project.

12 He was not identified as somebody not working for  
13 Brown & Root. Obviously, we told people that he worked for  
14 Brown & Root. He properly identified himself in that fashion  
15 whether he was talking to one person or whether he was talking  
16 to a group of people. He told them what he was there for, to  
17 measure their feelings towards management, their feelings towards  
18 construction, the interrelationship of groups on the site, how  
19 they felt about their jobs, that kind of thing.

20 JUDGE BECHHOEFER: Do you think an employee would  
21 talk more freely with a person like this consultant than with  
22 a line employee of Brown & Root?

23 WITNESS BROOM: I don't know, we tried both.

24 JUDGE BECHHOEFER: Right.

25 WITNESS BROOM: At the same time, we had our man in

1 personnel doing this same kind of thing. I was reluctant to  
2 have him do the same thing that Mr. Howell did, because I  
3 didn't want -- I didn't want to create a situation that our  
4 person had talked to everybody before or shortly after  
5 Mr. Howell had, but I did have him talk to quite a number of  
6 people.

7 I had him sit in in some groups with Mr. Howell.  
8 I had Mr. Howell, on other occasions, conduct his interviews  
9 without our man being present. I guess there's something to  
10 be said for both ways and I tried to do some of both.  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

---

1 JUDGE BECHHOEFER: Were there different written  
2 reports or reports?

3 WITNESS BROOM: Most of Mr. Howell's reports to me  
4 were verbal by telephone because things were happening very fast.  
5 Let me give you an example of exactly what happened.

6 The first day Mr. Howell got on the job site, I  
7 told him, I said go down there, and you pick at random some  
8 twenty, thirty people. Talk to them however you want to, and  
9 find out where this production pressure and harassment is  
10 coming from, and that's what he set out to do. That was his  
11 first venture, and I've forgotten. I think he talked to fifteen  
12 or twenty people that first day. About 5:00 o'clock in the  
13 afternoon he called me and he said, Mr. Broom, I don't know  
14 what to tell you. He says, I'm completely baffled. He says,  
15 I came down here to find something, and I haven't found it.  
16 He said, I have found a considerable amount of unrest among the  
17 people in terms of their feeling toward their supervision and  
18 management support, but these people are telling me their  
19 relationship with construction is very healthy and very good.

20 And then I really got concerned, because I didn't  
21 know if they were telling us the same thing that they would tell  
22 the NRC; I didn't know if they were being truthful; and that's  
23 when I said, we have to expand the sample size to 100 percent  
24 of all the people, and that's how the concept of the  
25 anonymous questionnaire and the series of group and

1 individual interviews to cover all of the people was developed.  
2 It was out of that first day's first pass at some group of  
3 people, trying to get a preliminary indication of what I  
4 was looking for.

5 I had misconstrued, perhaps, at that time, based on  
6 verbal reports, secondhand reports, of the NRC's findings in  
7 this area. I had thought that they were saying that the whole  
8 issue of harassment and intimidation centered around construc-  
9 tion workers going to beat up on QC inspectors and  
10 QC inspectors who were fearful or intimidated to the point  
11 that they wouldn't do their work properly. I'm not sure that's  
12 exactly what that Item 1 says now, later, in reading the  
13 report.

14 I believe that there is reference to management  
15 support, lack of management support, and this, that, and the  
16 other. If I had had that written document at that time, I  
17 perhaps wouldn't have been quite as surprised, but I expected  
18 to get a reading that says there is a harsh conflict between  
19 construction and QC inspectors on the job site. That's what  
20 Mr. Howell set out to find, and he didn't find that.

21 JUDGE BECHHOEFER: Did you get any -- do you remember  
22 any differences between the reports that you got from  
23 Mr. Howell and the reports that you got from your personnel  
24 representative?

25 WITNESS BROOM: No, I can't, because the two of them

1 went almost side-by-side, except for Mr. Howell going into a,  
2 you know, closed-door, and conducting some of the interviews.  
3 But our personnel man was involved intimately with  
4 Mr. Howell throughout the conduct of his surveys. He had  
5 worked with Mr. Howell on similar-type problems, not morale  
6 type problems, but productivity studies and things like that,  
7 and they had worked together before.

8 Their reports to me were parallel, verbally, and  
9 then, of course, my employee did not submit a written report  
10 to me, only Mr. Howell submitted a report in writing. But  
11 their findings were essentially the same.

12 JUDGE BECHHOEFER: Thank you.

13 BY MR. JORDAN:

14 Q Dr. Broom, on page 40 -- well, 39 to 40 -- you  
15 discuss the brochure that Brown & Root developed that the  
16 NRC believed overemphasized cost and schedule, you say at  
17 the top of 40 that, "My investigation subsequently showed  
18 that our inspectors did not feel cost and schedule were  
19 overemphasized." What did your investigation involve in that  
20 case?

21 BY WITNESS BROOM:

22 A My investion consisted of talking to some people,  
23 but also having consulting personnel help the peop'le,  
24 Mr. Howell specifically, and I think subsequent to that time,  
25 another consultant has asked some questions.

1 I guess my concern in this area was that -- I'm  
2 not trying to take issue with the interpretation being placed  
3 on the brochure by the NRC, but, again, if that brochure had  
4 created a negative attitude in the minds of our people, I  
5 needed to know the nature of that attitude, so I could try  
6 to be able to do something about it. I'm simply saying that  
7 when -- although cost and schedule are certainly mentioned  
8 in that brochure, our questioning of the people who attended  
9 that presentation didn't indicate that they felt that they were  
10 being concerned about cost and schedule as opposed to quality.

11 Q Doctor, we left a few things hanging from earlier  
12 this morning, and I'll get back to them and see if you were  
13 able to obtain the information. If not, we can hold it until  
14 a later time.

15 In particular, the information concerning the  
16 number of employees at the site, of Brown & Root employees at  
17 the site, off the site. I had the impression you might be able  
18 to get that information at lunch?

19 BY WITNESS BROOM:

20 A I'm sorry. I have someone chasing that information  
21 down, but I don't have the data yet.

22 Q I see.

23 BY WITNESS BROOM:

24 A If I get it this afternoon, I will give it to you.

25 Q I'm sure we will be able to have it tomorrow --



1 BY WITNESS BROOM:

2 A Yes.

3 Q -- that will be fine.

4 BY WITNESS BROOM:

5 A Yes.

6 Q I guess that will also include the names of the  
7 people interviewed in the Swayze investigation? If you will  
8 recall, you said that you could get those names later.

9 BY WITNESS BROOM:

10 A Before lunch?

11 Q No, no, no. You said just recently, in the last  
12 few minutes, that you --

13 BY WITNESS BROOM:

14 A Yes, I will. I will try to find out who the  
15 people were, by name, that were contacted.

16 MR. JORDAN: Finally, I've been discussing with  
17 Mr. Axelrad the questions of charts and information concerning  
18 people in various positions in both quality assurance and  
19 construction from 1977 to the present. I fully expect we  
20 can work out an acceptable way of doing that in writing and  
21 saving time here. I would reserve the right to get back into  
22 that, if need be, at the moment.

23 And with that reservation, I would pass the  
24 witness.

25 (Bench conference.)

10-13

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

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

JUDGE BECHHOEFER: Before Mr. Hager gets started, why don't we take an afternoon break of about fifteen minutes.

(A brief recess was had.)

---

STP  
11-1  
gmw

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

1 JUDGE BECHHOEFER: Back on the record.

2 Before we start, I'd just like to put everybody  
3 on notice we're aiming to finish tonight by around 5:30,  
4 approximately.

5 So, Mr. Hager or Sinkin.

6 MR. HAGER: Yes.

7 JUDGE BECHHOEFER: You may proceed.

8 CROSS-EXAMINATION

9 BY MR. HAGER:

10 Q Mr. Broom, I'll start on this question of  
11 building in quality which has concerned us throughout these  
12 proceedings and simply restate, I think, what we all understand  
13 just to set a predicate for some later questions.

14 I think everybody has stated that it is  
15 optimal to do the construction in such a manner and with  
16 such quality that you simply don't have problems to begin  
17 with. Is that a -- You don't have quality problems to begin  
18 with.

19 Would that be a fair statement?

20 BY WITNESS BROOM:

21 A Yes. We would like people to do the work  
22 correctly the first time.

23 Q And the best of all possible worlds I'd suppose  
24 would have nothing for quality assurance people to do.  
25 Everything would be going well, and they wouldn't have to be

1 writing reports.

2 BY WITNESS BROOM:

3 A Well, they would still have to do a lot of  
4 inspecting, and they'd basically expend most of their manhours  
5 but they wouldn't have many findings.

6 Q Okay. I think that's the point I wanted to  
7 make, that even if you did build in your quality, you'd still  
8 need a quality assurance program to assure that you were  
9 building in your quality to begin with.

10 BY WITNESS BROOM:

11 A That is the purpose of it.

12 Q Now, I think you said it is really a question  
13 of your building in quality. It is a matter of managing in  
14 such a way and assuring that everybody takes such responsibility  
15 for their work that they do perform this function of building  
16 in quality to begin with.

17 Is that again a fair statement? Or put that  
18 in your own words if it is not.

19 BY WITNESS BROOM:

20 A Mr. Hager, I'm sorry. I didn't understand  
21 what you said.

22 Q I'll put it as a question rather than a  
23 statement.

24 Could you tell us in your words how do we assure  
25 that we're building in quality from the start.

1 BY WITNESS BROOM:

2 A Building in quality is a responsibility of  
3 everybody in the team. When I use the term "building," I  
4 don't mean to restrict that to the constructor, the man  
5 pouring the concrete.

6 If we're going to build in quality, we've  
7 first got to understand the requirements, whether it is a  
8 nuclear powerplant project or an aircraft or whatever, and  
9 then we have to have everyone associated with implementing  
10 those requirements into a design, and then people who are  
11 responsible for taking that design and fabricating or  
12 manufacturing or constructing the product in conformance with  
13 that design committed to meeting all those requirements.

14 Q Okay. And -- Excuse me.

15 BY WITNESS BROOM:

16 A That I think is what's necessary to get quality  
17 built in, or we've used a variety of terms, but getting  
18 people committed to doing work properly the first time. And  
19 as we said earlier, that extends to the quality assurance  
20 people and inspection personnel, that they must be committed  
21 to doing their work correctly and doing it correctly the  
22 first time, I might add.

23 Q Right.

24 JUDGE BECHHOEFER: Mr. Hager --

25 MR. HAGER: Yes.

1 JUDGE BECHHOEFER: -- let me ask you, the  
2 questions you've asked so far have been pretty much the same  
3 as what Mr. --

4 MR. HAGER: This is just predicate. If I can  
5 ask the next question, I think you'll see where I'm going to  
6 with this. I had to lay out the predicate.

7 JUDGE BECHHOEFER: Well, there shouldn't be  
8 overlapping.

9 MR. HAGER: You have to lay down a little bit  
10 of predicate on these --

11 JUDGE BECHHOEFER: Fine. I just want to make  
12 sure you are going someplace that Mr. Jordan hadn't been already.

13 (Laughter.)

14 BY MR. HAGER:

15 Q You say if you are successful in that function  
16 of building in the quality, you say that still you'd have a  
17 need for the quality assurance program.

18 In your mind, would it make a difference  
19 whether the quality assurance program which we have to assure  
20 that the quality is being built in is operated by those people  
21 who are building the quality in or whether it were performed  
22 by a different organization entirely, entirely separate and  
23 distinct from the organization responsible for building the  
24 quality in?

25 Do you see any difference in the effect on those

1 people who are trying to build the quality in?

2 BY WITNESS BROOM:

3 A There was considerable discussion of this  
4 general subject earlier in testimony by Mr. Frazar, by  
5 Mr. Goldberg, and perhaps Mr. Oprea. I've forgotten. A number  
6 of points of view were expressed that I think are pretty  
7 similar.

8 And my opinion is very similar to that which  
9 has already been expressed. It is basically that if you  
10 were specifically talking about a nuclear powerplant project  
11 and you're talking about a quality assurance program for that  
12 project as required by the Nuclear Regulatory Commission  
13 within this regulatory framework, Appendix B, those kind of  
14 requirements, as opposed to some hypothetical situation in  
15 the manufacturing industry or somewhere; if we're talking about  
16 a nuclear powerplant project, then there is as prescribed in  
17 Appendix B the necessity for an element of independence  
18 between the people inspecting or verifying that the quality  
19 requirements have been met and the people doing the work.

20 There's been considerable debate for many  
21 years as to the details of what that degree of independence  
22 exactly organizationally how it must be achieved and so on.

23 I agree that there must be independence between  
24 the people inspecting a nuclear powerplant project and the  
25 people performing the work.

1 Now, I do not believe that that means that  
2 the quality control inspectors could not theoretically be  
3 a part of the project management team. The quality control  
4 arm -- I believe I'm correct in stating that -- and I'll not  
5 use a name because I'm not absolutely certain. But one of the  
6 major AE's and constructors in the country has that type of  
7 organizational structure where the inspectors in fact report  
8 through the project management chain and they have an outside  
9 quality assurance or auditing type arm.

10 That arrangement will work. That arrangement,  
11 in my opinion, achieves -- can achieve the required  
12 separation and independence between those inspecting or  
13 verifying the work and those responsible for performing the  
14 work. Because I think the intent there is to have people  
15 who can report to sufficiently high levels of management  
16 where their voice is heard with equal force as those being  
17 charged as responsible for getting the construction work done  
18 or getting the design work done, and I believe that type of  
19 structure can work.

20 Our company did not choose that type of  
21 organization. But that does not mean that that type  
22 organization won't work.

23 However, there is another element of the  
24 discussions that have been held over the last few weeks, and  
25 that is whether this type of organization should be completely



1 independent from the company responsible for doing the  
2 construction work, for example.

3 I believe that if you have a nuclear powerplant  
4 project wherein the quality control and quality assurance  
5 were done by an independent third party outside company  
6 as opposed to the company responsible for the construction  
7 and engineering, I think you have a more difficult time of  
8 having that project interface and function smoothly than if  
9 you have an arrangement similar to the one we have today.  
10 It doesn't mean it won't work. It doesn't mean it can't be  
11 made to work. But in my opinion, the arrangement similar to  
12 what we have, similar to those that are found around the  
13 industry are the better types of division of responsibility.

14 Q Could you explain what you mean by the word  
15 "interface" in that last sentence?

16 BY WITNESS BROOM:

17 A Interfacing is dealing with each other.

18 Q Very precisely, what kinds of problems would  
19 you see in interfacing with an entirely independent third party  
20 quality assurance organization and, for example, your own  
21 Brown & Root Construction organization?

22 BY WITNESS BROOM:

23 A I think it would be difficult under that type  
24 of an arrangement, perhaps not prohibited but difficult to  
25 achieve a similarity in procedures and methods of doing the

1 work, sequencing work and so on as to closely interface or  
2 deal with each other in those regards. I think if you have  
3 one company bringing to the project one way of doing things  
4 administratively and every other way and another company with  
5 its own approaches, that's a potential for difficulty in  
6 interfacing those two organizations.

7 Q Do you feel that Brown & Root would have less  
8 of a sense of responsibility or would perform its construction  
9 and design tasks less well if the quality assurance program  
10 were in fact carried out by an entirely independent third party  
11 quality assurance organization?

12 BY WITNESS BROOM:

13 A We can't afford for that to happen. We could  
14 not afford for that to happen. We have to meet our quality  
15 obligations no matter what type of contractual arrangement we  
16 might have on a project.

17 I think the potential for that occurring is  
18 there. I think the potential for the workmen in the field  
19 to say, "Well, those guys are not Brown & Root. That's some  
20 other company. They are here to inspect my work. They are  
21 going to check on me. They are going to tell me whether I've  
22 done it to suit them or not."

23 I think at the working level there is a potential  
24 for that kind of thing to arise. I don't know that it would  
25 occur. But I believe there is a potential for it, and because

1 that potential is there, I think that's something to be avoided.  
2 I think it is an unnecessary risk.

3 Q Now, Mr. Vurpillat, I just have a question  
4 here about numbers which you might be able to clear up -- try  
5 quickly for me.

6 BY WITNESS VURPILLAT:

7 A I'll try.

8 Q This is on page 18, and this is the very last  
9 line on the page, line 46.

10 Perhaps you could clear up -- You testified  
11 earlier in my recollection that the present number of persons  
12 in the quality assurance department would be 228 at the site  
13 and 38 at the home office.

14 Simply correct that for me if I misunderstood  
15 that.

16 BY WITNESS VURPILLAT:

17 A No. I believe that's what I said.

18 Q Okay. Could you explain for me what appears to  
19 be a different number in the text which I just referred to  
20 which refers to approximately 500 at present in the quality  
21 assurance department?

22 BY WITNESS BROOM:

23 A Mr. Hager, that's my testimony, and I think  
24 he'll give you the same answer that I would give, but since it  
25 is mine, let me explain the difference.

1                   The number referred to there is the total number  
2 of QA/QC employees in the QA department under Mr. Vurpillat.  
3 It is not the total number on the South Texas Project. The  
4 number that he gave for the South Texas Project are the proper  
5 numbers for that project.

6                   Q           Okay.

7 BY WITNESS BROOM:

8                   A           These numbers include personnel at Comanche Peak,  
9 on our fossil projects, and in staff positions that are not  
10 assigned to South Texas.

11                  Q           I see.

12 BY WITNESS BROOM:

13                  A           That's what I was trying to address here was the  
14 total staffing in QA.

15                  Q           Thank you for clearing that up.

16                               I'd like to ask a question. If we look at the  
17 figure for 1975, could we have that translated into an STP  
18 figure?

19                               This may have to be in rough terms, but if you  
20 have the exact figures available that would be helpful.

21 BY WITNESS BROOM:

22                  A           I'm sorry. I'm not real sure I -- I thought I  
23 knew what you asked for, but would you ask again?

24                  Q           Yes. This would be the 1975 figure broken down  
25 for the South Texas Project. We have a hundred here that would

1 apply to the quality assurance department generally. I'd  
2 like to have that broken down for just the South Texas Project,  
3 again referring to the last line on page 18.

4 BY WITNESS BROOM:

5 A Mr. Hager, I don't have the precise number.  
6 But let me remind you that we received our construction permit  
7 in December of 1975, and so during 1975 the people we had  
8 assigned to the project were in a planning and management  
9 and the home office role. I would expect the number to be  
10 pretty small.

11 If you need an accurate figure, that's as close  
12 as I can come.

13 Q Okay. By "very small," if you could just give  
14 a very rough estimate, just tag a number on what very small  
15 would be.

16 BY WITNESS BROOM:

17 A I would guess if you averaged during the year  
18 you probably would average five to ten people.

19 The reason I have to be that vague is that  
20 during those type of activities it would be very common for  
21 people in the QA departments, specialists of one type or another  
22 to be charging part time to these project duties as opposed to  
23 full-time assignments later on. And so that's a rough estimate,  
24 but I would guess it would be five or ten equivalent people.

25 Q Do you have any guess just again about 1977 as

1 you were building up in your construction about the number  
2 of quality assurance people you would have had out at the  
3 South Texas site?

4 BY WITNESS BROOM:

5 A We had a full complement by that time, of  
6 course, of people at the site, and it would be considerably  
7 higher than that. But, unfortunately, I don't have an estimate  
8 of --

9 Ray, have you checked those numbers?

10 BY WITNESS VURPILLAT:

11 A No. I don't have those numbers for 1977,  
12 Mr. Hager.

13 Q Would it be on the order of this roughly 250,  
14 260 that we had today, or would it be substantially smaller?

15  
16 - - -  
17  
18  
19  
20  
21  
22  
23  
24  
25

1 BY WITNESS VURPILLAT:

2 A I would -- I don't know. I would suspect it  
3 would be smaller, but I don't know.

4 JUDGE BECHHOEFER: Dr. Broom --

5 WITNESS BROOM: Yes, sir.

6 JUDGE BECHHOEFER: -- is the less than 100 that  
7 appears here for '75, is that closer to 90 than 15 or 20?  
8 Do you have any idea what that is?

9 WITNESS BROOM: Judge Bechhoefer, I checked  
10 these numbers when I wrote this, but this testimony has been  
11 prepared for some time now.

12 As I recall, the number was around 90, and  
13 that's why I said less than a hundred just to be conservative.

14 JUDGE BECHHOEFER: I just wanted to clarify  
15 the general range.

16 WITNESS BROOM: It was not 10 or 20.

17 In 1975 -- Let me think for a moment.

18 (Pause.)

19 In 1975, the staff at Brunswick was coming  
20 down very rapidly. We had been to 180, 200 people there at  
21 one point, and it was down to a much smaller number at that  
22 point. And, of course, the Comanche Peak Project, you know,  
23 was in its early stages and so it had a small staff. It  
24 would have had to have been 80, 90 people. It may have been  
25 even a little higher than that. But it was not 10 or 20 people.

1 JUDGE BECHHOEFER: Right.

2 I take it it would fluctuate as to the  
3 particular status of the projects under control.

4 WITNESS BROOM: Yes, sir. That's correct.

5 JUDGE BECHHOEFER: And from what I gather,  
6 before '75 it might have been higher as a result of Brunswick  
7 at some point.

8 WITNESS BROOM: I seem to remember there being  
9 about 160 to 80 people at one point in time at Brunswick. So  
10 obviously there were more than a hundred people on the QA/QC  
11 payroll.

12 JUDGE BECHHOEFER: I just wanted the record to  
13 reflect the general range.

14 WITNESS BROOM: Yes. Right.

15 JUDGE BECHHOEFER: Thank you.

16 BY MR. HAGER:

17 Q The thrust of my question is can you try to  
18 establish a trend in the growth of the number of quality  
19 assurance people at the project? So do you have any information  
20 at all, either Dr. Broom or Mr. Vurpillat, about earlier figures  
21 on quality assurance prior to these figures we have now for the  
22 present?

23 BY WITNESS BROOM:

24 A Prior to 1975?

25 Q Prior to the present. Prior to these figures



1 we have of 228 and 38 for the present.

2 Do you have any prior numbers at all available?

3 BY WITNESS VURPILLAT:

4 A Mr. Hager, as I recall, going just back through  
5 some historical -- historical as far as I was concerned, anyway,  
6 at about the beginning of 1979, for instance, we were about at  
7 the same level as we are now. I don't have any breakdown on  
8 that. I'm just talking about total figures, and this is for  
9 STP, not for the total QA department.

10 It was considerably higher than that at the  
11 beginning of 1980, maybe as many as 280 or so. I don't have  
12 an exact number in mind but of that magnitude.

13 It is sort of a sine wave kind of a thing or  
14 a saw-tooth. It is not precise like a sine wave. It is more  
15 like a saw-tooth.

16 Q Do you have any impression as to whether it  
17 would have peaked at about the same level earlier than '79,  
18 perhaps '77, '78?

19 BY WITNESS VURPILLAT:

20 A No. I think it probably peaked sometime in  
21 1980 if you are talking about a peak in staff.

22 Q Yeah. Maybe I misused that term. I'm thinking  
23 about the same level we had today, talking about a sine wave.  
24 It was about the same level in '79.

25 When did it first achieve that level that we had

11-16  
1 today? Maybe that would be a better way to phrase the question.

2 BY WITNESS VURPILLAT:

3 A I don't recall. I would suspect just from  
4 my experience on other similar projects that at that point in  
5 time that was probably very near the top to that point in time.

6 Q So you have seen a gradual increase from '75  
7 down to that 10 or 20, 10 to 15 level, and then it gradually  
8 increased up to '79 when it reached about the level we have  
9 today. That continued to increase up to 1980, the high of 280,  
10 and now it has dropped off back to the '79 level.

11 Is that a fair statement?

12 BY WITNESS VURPILLAT:

13 A Approximately.

14 Q Okay. Now, do you have any information about  
15 the level that Houston Lighting & Power, the level of quality  
16 assurance personnel that Houston Lighting & Power has maintained  
17 during this same period?

18 BY WITNESS VURPILLAT:

19 A No. I don't have any historical information --  
20 again, historical to me -- as to their staffing over those same  
21 periods of time.

22 Q Do you have any sense of what they have now out  
23 at the site in that quality assurance department?

24 BY WITNESS VURPILLAT:

25 A I believe that Mr. Frazar indicated in his

1 testimony that the number was 42, although I'm not sure that  
2 that's precise. I think it is in the testimony.

3 Q Okay. Thank you.

4 Do you have any sense of whether the ratio  
5 between Houston Lighting & Power quality assurance personnel  
6 and that of Brown & Root quality assurance personnel has  
7 remained about the same or changed during this period?

8 BY WITNESS VURPILLAT:

9 A No. I don't --

10 MR. REIS: Mr. Chairman, the witness has  
11 previously testified that he doesn't know what the historic  
12 levels were for HL&P. So I don't know how the question can  
13 answered.

14 JUDGE BECHHOEFER: All right.

15 MR. REIS: There's no foundation.

16 (Bench conference.)

17 JUDGE BECHHOEFER: I think I'll sustain that,  
18 because if he doesn't know one aspect of the ratio, he can't  
19 hazard a guess at the answer.

20 MR. HAGER: He has indicated a problem with  
21 numbers, and I thought he might have a sense of ratios; it  
22 might be easier for him to answer. I mean, he could easily  
23 answer no as well as Mr. Reis could have.

24 (Bench conference.)

25 JUDGE BECHHOEFER: I think we'll sustain that,

1 because the information would not be very useful or accurate,  
2 I should say.

3 BY MR. HAGER:

4 Q On page 30 of, in this case, Dr. Broom's  
5 testimony, at the bottom there is reference to the altercation  
6 between James Marshall and Joe Bazea back in 1977.

7 Dr. Broom, are you familiar with the actions  
8 taken by Brown & Root in response to this incident?

9 BY WITNESS BROOM:

10 A Yes, sir. I think I'm generally responsible --  
11 generally familiar with the actions taken in response to that  
12 incident.

13  
14  
15 - - -  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

1 Q On the top of page 31 you mention that the  
2 incident was brought to final resolution.

3 Could you describe briefly what the final  
4 resolution of that incident was?

5 BY WITNESS BROOM:

6 A Yes. Mr. Bazea, as I recall, actually walked  
7 directly off the site following the incident. He was  
8 terminated by us. Obviously, we don't condone that type of  
9 behavior on the job site.

10 Houston Lighting & Power Company, I believe,  
11 interviewed a number of the inspectors. I believe they  
12 interviewed all of our civil inspectors.

13 They concluded that their -- the inspector's  
14 perception of this was that it was an isolated instance and  
15 was not anything to be concerned about in terms of creating  
16 a loss of confidence in management or perception of any pattern  
17 of harassment.

18 The NRC in their inspection report 77-08  
19 I believe stated that they interviewed all civil inspectors  
20 and found no evidence of intimidation and rather that this was  
21 a isolated instance.

22 Mr. Carl Crane, who was our construction site  
23 manager at the time, met with all the supervision on the  
24 project, all of our Brown & Root supervision in construction  
25 and told them the proper way for resolving disputes and that the

1 actions displayed by Mr. Bazea were not to be tolerated.

2 He further held a meeting with all of the  
3 civil construction personnel down at the craft level and  
4 basically related the same message to them.

5 And in the QA/QC area, the QA/QC -- the QA  
6 project manager at the time told all of the QA/QC personnel  
7 that any threats made by construction to them would not be  
8 tolerated, disciplinary actions would be taken, and that any  
9 such matters were to be reported to him promptly should any  
10 subsequent events occur of that nature.

11 I believe that's a summary of the actions that  
12 we took.

13 Q Are you aware whether the policies --  
14 BY WITNESS BROOM:

15 A Pardon me. I should add that of course  
16 Mr. Marshall, there was no disciplinary action against him,  
17 and he stayed on the payroll.

18 Q Are you aware whether the policies of Brown &  
19 Root in response to this incident were at any time reduced to  
20 writing and distributed to quality assurance personnel?

21 BY WITNESS BROOM:

22 A I don't believe that we issued any instructions  
23 in writing unless it might have been a memorandum from the  
24 project construction manager. I don't recall there being one.

25 There was a verbal description of, you know, if

1 a condition arises on the job site where tempers begin to flare,  
2 and we've got to cool that down and call supervision and  
3 get them involved and escalate the matter, rather than  
4 allowing the situation to --

5 Q Excuse me. If I were to show you an  
6 interoffice memo dated July 27, 1977, from T. P. Gardner  
7 on the subject of "Construction/Quality Assurance Interfacing,"  
8 would that possibly refresh your memory as to --

9 BY WITNESS BROOM:

10 A I may or may not have seen that memo. I'd  
11 be happy to look at it.

12 You understand that Mr. Gardner was the QA  
13 manager, not the construction project manager.

14 JUDGE BECHHOEFER: Why don't you show  
15 Mr. Newman, as well, or let him look at it.

16 (Document handed to the witness and Counsel.)

17 WITNESS BROOM: I've read the document.

18 BY MR. HAGER:

19 Q Does this appear to be in the form of a Brown &  
20 Root interoffice memo?

21 BY WITNESS BROOM:

22 A It is.

23 JUDGE BECHHOEFER: Can somebody refresh my  
24 recollection as to who Mr. Gardner is?

25 WITNESS BROOM: Yes, sir. Mr. Gardner was the

11-22

1 project quality assurance manager at the time.

2 JUDGE BECHHOEFER: At that time, right.

3 WITNESS BROOM: I referred earlier to the fact  
4 that he had met with his personnel and told them of the  
5 incident and that such behavior would not be tolerated.

6 I was not aware that he had written this  
7 memorandum, but I think it basically conveys the message  
8 that I was trying to describe.

9 JUDGE BECHHOEFER: Well, I just wanted to make  
10 sure that I had the right person.

11 WITNESS BROOM: This is not the construction  
12 project manager that I also referred to.

13 This is the quality assurance manager for the  
14 project at the time.

15 BY MR. HAGER:

16 Q Was Mr. T. P. Gardner in a position of  
17 authority to write such a memo at this stated date here,  
18 July 27, 1977?

19 BY WITNESS BROOM:

20 A Yes, he was.

21 MR. HAGER: I would like to have this marked  
22 as CCANP Exhibit No. 16.

23 (CCANP's Exhibit No. 16 was  
24 marked for identification.)

25 MR. HAGER: And subject, given the pattern of



1 the Board's ruling here as to one case, I will offer it  
2 in evidence, subject, of course, to any information the  
3 Applicant's might bring to question its authenticity.

4 I think we've established it sufficiently to  
5 introduce it at this time, subject to such an opportunity  
6 for the Applicants.

7 MR. NEWMAN: There's been absolutely no  
8 authentication or description of the document.

9 There's not a witness through whom it can be  
10 introduced.

11 I have no objection to having it marked and  
12 used for purposes of conducting cross-examination, but  
13 clearly, without something further, this is not admissible  
14 evidence.

15 MR. HAGER: Perhaps I could ask a few more  
16 questions about Mr. Gardner and his position within the  
17 quality assurance program, and Mr. Broom's supervisory --

18 MR. NEWMAN: No matter how many questions --

19 JUDGE BECHHOEFER: I was going to point out the  
20 witness said that he was not familiar with this memo, so  
21 it hasn't been properly authenticated.

22 MR. HAGER: The witness is in the position, I  
23 think, to have custody of such memo in the sense that it  
24 was produced by the department over which he has supervisory  
25 powers, and he would be the highest person within Brown &

11-24

1 Root. It's a Brown & Root document, so in his management  
2 capacity at Brown & Root, he would have, say, constructive  
3 custody of such a document, and he would be appropriate for  
4 introducing the memo at this time. As I say, subject to  
5 any questions that might be raised to its authenticity.

6 He stated it's in the proper form of a Brown &  
7 Root document, and as far as -- he has no objections on the  
8 face of it to acknowledging it --

9 MR. NEWMAN: The witness said --

10 MR. HAGER: -- as a Brown & Root document.

11 MR. NEWMAN: -- absolutely nothing of the kind.

12 MR. HAGER: I think the record will show. I can  
13 ask again.

14 BY MR. HAGER:

15 Q Dr. Broom, does this on its face appear to be  
16 in the form of a Brown & Root memorandum?

17 BY WITNESS BROOM:

18 A It appears to be an interoffice memorandum of  
19 Brown & Root, interoffice memorandum; that's correct.

20 Q Do you know of any --

21 BY WITNESS BROOM:

22 A That's what the paper says.

23 Q Do you have any reason to doubt its authenticity  
24 as a memorandum generated within the department which  
25 reports to you?

11-25

1 BY WITNESS BROOM:

2 A I don't have any reason to doubt the authenticity.

3 Q Okay.

4 MR. HAGER: I think unless the Applicants would --

5 MR. NEWMAN: Mr. Chairman, the witness has not  
6 verified in any way that this is a Brown & Root document.7 His testimony is simply that on the face of it  
8 it appears to be a Brown & Root document.9 Obviously, you need a witness or somebody who can  
10 authenticate the document before it can be received in  
11 evidence; and I have never heard of the concept of  
12 constructive custody, whatever that means.

13 MR. HAGER: This is a question --

14 MR. NEWMAN: And there's no showing that this  
15 document was ever under Mr. Broom's custody16 Mr. Broom hasn't indicated that it was under  
17 his custody, much less his preparation or supervision.

18 BY MR. HAGER:

19 Q Dr. Broom, are the documents generated by the  
20 project QA manager documents which are available to you in  
21 the normal course of your duties in supervising that  
22 department?

23 BY WITNESS BROOM:

24 A Yes, they are available to me.

25 Q And you have direct supervisory authority over

1 the JTP Project QA manager?

2 BY WITNESS BROOM:

3 A I do at this time. I did not at the time this  
4 memorandum was written, but I do at this time.

5 MR. NEWMAN: Mr. Chairman, I'm going to ask now  
6 that that line of cross-examination be cut off. There's no  
7 more point in trying to get this document into evidence.

8 Mr. Broom has stated that he was not in the  
9 position of supervising this individual at the time in  
10 question, and so there can be no way in which this document  
11 can be gotten into evidence this afternoon, if ever.

12 (Bench conference.)

13 JUDGE BECHHOEFER: Just a point of inquiry.

14 At some point each of the members of this Board  
15 has seen this document. We can't recall where.

16 What we were trying to figure out is whether it  
17 is one of the exhibits or proposed exhibit of any party.

18 MR. HAGER: I think I can give the Board information  
19 on it.

20 This was attached to the Intervenor's Answers to  
21 Interrogatories, so that it has been available to the  
22 Applicant for some time now to question its authenticity and  
23 so forth.

24 We've never at any time received any information  
25 from the Applicants that would --

11-27

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

MR. NEWMAN: Mr. Chairman, one raises questions as to authenticity when a document is sought to be introduced into evidence, not when it's appended to an interrogatory question.

Those matters are being raised now.

JUDGE BECHHOEFER: Well, I realize that.

(Bench conference.)

- - -

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

BTP  
12-1  
he

1 MR. REIS: Mr. Chairman, if the Staff can be heard.

2 JUDGE BECHHOEFER: Yes.

3 MR. REIS: The Staff doesn't believe there's any  
4 foundation for this. Of course, the way to establish that  
5 this came into the Intervenors' hands was the request for  
6 admission some time ago. It's kind of late right now.

7 The Staff has no reason to doubt its authenticity.  
8 Perhaps the person who gave the Intervenors the document might  
9 say how they received it and we could get it authenticated  
10 that way.

11 It's a matter of technical proof. I have to agree,  
12 I have no reason to doubt its authenticity, but as a legal  
13 matter I don't think it's proper.

14 JUDGE BECHHOEFER: As a legal matter, we could  
15 maybe ask these people who are named on the document or on  
16 the distribution list and get them to authenticate it. I'm  
17 not sure it's worthwhile.

18 MR. HAGER: I think at the same time as a legal  
19 matter we're talking about a corporation that generates  
20 thousands and thousands of documents, and that the corporation  
21 has custody of those documents, and we are here speaking with  
22 people who speak with the authority of the corporation and  
23 they have stated they have no reason to question the  
24 authenticity of the document, and if there were any reason,  
25 it could be furnished, so this is an appropriate time, through

12-2

1 an officer of the corporation, what purports to be a corporate  
2 document.

3 MR. NEWMAN: Mr. Chairman, there's not even any  
4 evidence to indicate that this document was ever distributed  
5 to anybody.

6 JUDGE BECHHOEFER: Are you challenging its  
7 authenticity?

8 MR. NEWMAN: I am challenging the adequacy of the  
9 foundation laid for its introduction, which goes to its  
10 authenticity and to the lack of foundation through the testimony  
11 of an individual responsible for generating the document, or  
12 supervising such an individual, and Mr. Broom is not any of  
13 those.

14 JUDGE BECHHOEFER: Let me ask you, if your witness  
15 does not want to testify concerning this document, should he  
16 have testified concerning the incident? This goes to an  
17 incident to which he testified.

18 MR. NEWMAN: The witness testifies as to matters  
19 of his own knowledge. This is not a matter, obviously, of the  
20 witness' own knowledge. He was not in charge of the department  
21 at the time. He does not know how the document was generated,  
22 and I think there's just no connection between the fact that  
23 he has discussed a similar incident in his testimony.

24 I'm not even clear, by the way, that we're even  
25 talking about the same incident.

1 JUDGE BECHHOEFER: Well, this is one thing that  
2 we would want to establish.

3 MR. NEWMAN: There's no way of establishing that  
4 through any person that's in this room, Mr. Chairman, other  
5 than perhaps somebody who obtained the document through some  
6 other means.

7 MR. HAGER: Perhaps just one question, or even two  
8 further questions of the witness.

9 BY MR. HAGER:

10 Q Dr. Broom, have you reviewed the first two  
11 sentences of this memorandum?

12 BY WITNESS BROOM:

13 A Yes, I have read the first two sentences.

14 MR. NEWMAN: Mr. Chairman, I have a pending  
15 objection and I don't want any more questions until that's  
16 ruled on.

17 MR. HAGER: This has been given to the witness to  
18 refresh his memory about the incident and the issuance of the  
19 memorandum.

20 JUDGE BECHHOEFER: Right. Well, you can question  
21 him about it without introducing it into evidence. He has an  
22 objection to the introduction.

23 MR. HAGER: Yes. What I'd like to do is go on  
24 with the discussion. I think perhaps later on as we get a  
25 few more questions that we might be able to introduce it, as



12-4 1 the witness refreshes his memory on the incident in this  
2 response.

3 BY MR. HAGER:

4 Q Dr. Broom, does your reading of the first two  
5 sentences, or any other part of the memorandum, refresh your  
6 memory as to the response of Brown & Root to the James Marshall  
7 incident which is discussed at Pages 30 and 31 of your testimony?

8 BY WITNESS BROOM:

9 A No. These first two sentences don't refresh my  
10 memory about the actions -- Did I understand you to say the  
11 response?

12 Q The response of Brown & Root.

13 BY WITNESS BROOM:

14 A I'm not sure what you're trying to get at. I think  
15 I'm aware of the actions that we took.

16 If this memo was written by Mr. Gardner and  
17 distributed as it is addressed to all QA/QC personnel, in my  
18 earlier summary I did not state that fact.

19 I stated that he informed all of the QA/QC personnel  
20 that intimidation, threats, and so on, would not be tolerated,  
21 to work in a businesslike fashion, and the general discussion  
22 of the incident that had happened.

23 This may have been the way that he accomplished  
24 that. I don't know.

25 Q Are the contents of this memorandum generally

12-5

1 consistent with your understanding of the information which  
2 Mr. Gardner passed along to the quality assurance people?

3 BY WITNESS BROOM:

4 A I did not have a copy of this memorandum prior to  
5 just now. I don't know whether he in fact distributed this  
6 memorandum. I don't know whether he stated everything that's  
7 on this memo to the people.

8 In general, it falls into the category of the  
9 information that I was discussing earlier. I was not aware of  
10 some of the specific wording here, but in general it, I believe,  
11 conveys the message that Brown & Root does not tolerate  
12 confrontations and fights and that type behavior, and that we  
13 expect our employees to behave in a professional manner, and  
14 that kind of information; yes, I think that type of information  
15 was conveyed to the QA/QC personnel by Mr. Gardner.

16 Q Would you say, then, generally the third paragraph,  
17 starting with the steps that follows have been taken to  
18 eliminate the friction between the two groups, following right  
19 down to the end of the memorandum, would you say that these do  
20 reflect the steps that were taken?

21 BY WITNESS BROOM:

22 A Are you referring to the first four items?

23 Q I was going to do this all at once. I think we  
24 could refer to all eight items separately numbered one to four  
25 there.

1 BY WITNESS BROOM:

2 A Well, I think that in reading this, the first four  
3 items reflect what has been a policy, if not written down in  
4 exactly these same words, or perhaps just spoken, a policy at  
5 Brown & Root projects for as long back as I've known anything  
6 about them.

7 We expect people to resolve disputes by referring  
8 matters to their supervision rather than fighting. We insist  
9 on that kind of performance.

10 I think that's what those first four items say.  
11 I think subsequent to this, at a later time a formal policy  
12 was published, or procedure was published that embodies  
13 basically these four steps in a more formalized document,  
14 but yes, this is basically our policy, the way we want our  
15 employees on a construction site, when faced with a situation  
16 where someone is angry or losing their temper or a strong  
17 difference of opinion arises, this is the way we want them  
18 to behave.

19 This latter part of the memo is not that. The  
20 latter part seems to be some instructions from Mr. Gardner,  
21 or some advice, if you will, from Mr. Gardner to his people  
22 as to proper ways to approach their work, proper ways to  
23 promote cooperative attitudes and mutual respect among QA/QC  
24 and construction on the site. It seems like some human  
25 relations principles are communicated in those, basically.

1 Q Do you find any of those principles inconsistent  
2 with the policies of Brown & Root at the time, 1977?

3 BY WITNESS BROOM:

4 A No, I don't. I hate to use your term "policies of  
5 Brown & Root," because I don't know that we had a specific  
6 policy that embodied these latter instructions, but certainly  
7 we expected people to cooperate and to behave professionally  
8 and to try to engender mutual respect and understanding, and  
9 in that context, yes, they reflected the way we wanted our  
10 people to behave.

11 Q And then looking up at the first paragraph, do you  
12 find the first paragraph a correct description, an accurate  
13 description of the incident that we're discussing, that you've  
14 also discussed in your testimony at Pages 30 to 31? This is  
15 the Marshall incident.

16 BY WITNESS BROOM:

17 A I believe so. I believe the personnel records  
18 show that the construction worker was terminated. The words  
19 here are that he no longer works on the job; if that's not  
20 an inconsistency, yes, I think that first paragraph accurately  
21 summarizes what I tried to state in my verbal testimony.

22 Q Looking then at the second paragraph, would you  
23 say that this was a fair statement, the first sentence would be  
24 a fair statement of the conclusions of Brown & Root after  
25 having investigated this incident?

1 BY WITNESS BROOM:

2 A I don't believe so. From my understanding of the  
3 findings of our investigation and the clients and the NRC, I  
4 believe -- well, again, I didn't write this memo and I don't  
5 know what Mr. Gardner intended by the memo, but my understanding  
6 of the situation is that the first sentence could really be  
7 slightly modified to focus on that particular incident.

8 If you would construe that first sentence in the  
9 second paragraph to mean there was an inordinate amount of  
10 friction across the board between QC and the entire civil craft,  
11 that's not my understanding.

12 I think the investigation indicated that on that day  
13 that Mr. Brazeal and Mr. Marshall had a considerable amount of  
14 friction over some considerable period of time that really  
15 wasn't handled properly, and ultimately resulted in pushing  
16 and shoving and falling an injury to Mr. Marshall.

17 Q Would the second, third and fourth sentences of  
18 Paragraph 2 accurately reflect your understanding of the NRC's  
19 position and Brown & Root's attitude toward the NRC position?

20 MR. REIS: Mr. Chairman, I'm going to object. He  
21 can ask direct questions incorporating that material. If this  
22 is again an attempt to get the document introduced into evidence,  
23 even though he agrees a hundred percent with the document, it  
24 still does not come into evidence as a communication of Brown &  
25 Root at all.

1 Now, Mr. Singleton is going to be here, among  
2 other people mentioned, who will testify, who were inspectors  
3 at the time. This document is addressed to all QA/QC personnel.  
4 Perhaps at that time it could be shown to them and asked, did  
5 you receive this at that time.

6 There are a number of inspectors listed on the  
7 witness lists of the various parties, who were inspectors then  
8 and they could be shown to them.

9 If this is a continued attempt to get this  
10 introduced, I object if this is an attempt to refer to matters  
11 that I have no idea what they mean and will not appear -- will  
12 not mean anything on the face of the record.

13 I object to the question on the grounds that it's  
14 meaningless in the record.

15 MR. NEWMAN: Mr. Chairman, by the way, this whole  
16 inquiry gets to a really ridiculous position because at one  
17 point this memorandum purports to describe what the Nuclear  
18 Regulatory Commission inspectors found, and we have no way of  
19 even talking to the NRC inspectors who were involved to verify  
20 that this was their impression of the incident.

21 As Mr. Reis indicated, this is really a wild goose  
22 chase and truly a waste of time. We ought to just terminate  
23 this line of cross and get on.

24 JUDGE BECHHOEFER: Well, Mr. Newman, the incident is  
25 described in the witness' testimony, and if we can't get an

1 adequate record on it we might have to strike everything about  
2 that.

3 MR. NEWMAN: The witness has stated what his  
4 knowledge of the incident is.

5 JUDGE BECHHOEFER: I recognize that, but his  
6 knowledge is too incomplete for us to render a full decision.

7 We want to establish an adequate record on these  
8 various incidents.

9 MR. NEWMAN: Then you talk to the people who were  
10 responsible for the job at the time. There will be NRC  
11 investigators here who looked into this matter. There will be  
12 people from Houston Lighting & Power Company, and their quality  
13 assurance department can be asked about this matter.

14 MR. HAGER: Mr. Chairman --

15 MR. NEWMAN: It's absolutely nonsense, by the way,  
16 to have to rely on an unauthenticated memorandum.

17 MR. REIS: Can I also point out that this incident  
18 is recounted in Staff Exhibit 4. The position of the NRC which  
19 is supposedly set out there isn't necessarily the same as in  
20 Staff Exhibit 4, and one of the authors of Staff Exhibit 4 is  
21 listed as a witness.

22 MR. HAGER: We're talking about the response of  
23 Brown & Root. We have a document which on its face purports  
24 to be part of the response of Brown & Root to the situation.  
25 We have a witness who has come before us to testify about the

12-11

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

1 response of Brown & Root to this incident, and either he is in  
2 a position to agree that this is part of the response or he  
3 states that he has no knowledge, and I think the Applicants  
4 are bound then to -- I think it's an authenticated document on  
5 the basis -- so far, subject to the Applicant's power to  
6 question it's authenticity. We're in an administrative  
7 proceeding here. We're not talking about the full rigors of  
8 the minutia of legal rulings and authenticity. We're talking  
9 about more flexible proceedings.

10 The Applicants have it fully within their power to  
11 question the authenticity of this document if they can do so  
12 and we have an official of the organization who will have the  
13 responsibility, custodial responsibility, for maintaining this  
14 document.

15 JUDGE BECHHOEFER: Well, that isn't established thus  
16 far. I do have one question concerning it's authenticity.

17 What do the numbers 35-1197 mean in the upper right-  
18 hand corner?

19 WITNESS BROOM: That is the identification number  
20 of this project. It's the job number. It's an accounting  
21 identifier.

22 JUDGE BECHHOEFER: Is that alone an identifier which,  
23 if you look at Brown & Root's official records, by that number  
24 you would come up with this document as a document that --

25 WITNESS BROOM: Yes.



1 Yes, that is part of the way in which the records  
2 are maintained.

3 MR. NEWMAN: Again, Mr. Chairman, the witness is not  
4 saying that this identifies this particular memo, only that it  
5 identified the STP job.

6 JUDGE BECHHOEFER: Well, what I was trying to ask  
7 is if that number identified this memorandum, that number, plus  
8 the date which is under it.

9 WITNESS BROOM: No. That is simply a date and the  
10 numerical name for the project.

11 JUDGE BECHHOEFER: Okay.

12 MR. HAGER: Mr. Chairman --

13 JUDGE BECHHOEFER: At this time, it still has not  
14 been authenticated properly, though.

15 MR. HAGER: Mr. Chairman, just along the same lines  
16 that you've been going, there's another number along the side  
17 which we might have the witness comment on if he has any  
18 knowledge of that.

19 WITNESS BROOM: I --

20 BY MR. HAGER:

21 Q Dr. Broom, do you know what the number along the  
22 side of the document would mean in Brown & Root's administrative  
23 faculties?

24 BY WITNESS BROOM:

25 A I don't have the vaguest idea as to what that number  
is.

1 Q Okay.

2 (Counsel conferring.)

3 MR. NEWMAN: Mr. Chairman, in an effort to get this  
4 thing ongoing -- the Board is obviously interested in the  
5 memorandum. I'll withdraw my objection to getting the memorandum  
6 into evidence. Let's just get on with it.

7 JUDGE BECHHOEFER: Well, I would like to find out  
8 if it really was transmitted, because I don't think it --

9 MR. NEWMAN: Subject to further authentication.

10 JUDGE BECHHOEFER: Yes. If this is just a memo  
11 that somebody drafted and it didn't happen to be sent, then it  
12 should not be admitted.

13 MR. NEWMAN: Well, at some point perhaps he can  
14 authenticate the document, but I think we can go on now.

15 JUDGE BECHHOEFER: Okay.

16 Does the Staff have any objection?

17 MR. REIS: The Staff has none. The technical  
18 objection, as I indicated originally.

19 If the Applicants are going to volunteer, as I  
20 think they should have and should, authenticate the document,  
21 they can check their files and if it doesn't exist, that's  
22 something else.

23 MR. NEWMAN: All right. Well, let's proceed  
24 subject to check that the document can be authenticated.

25 JUDGE BECHHOEFER: Subject to that condition, we

12-14 1 will allow the document to be admitted.

2 (CCANP Exhibit No. 32(a), previously  
3 marked for identification, admitted.)

4 (Bench conference.)

5 JUDGE BECHHOEFER: Go ahead, Mr. Hager.

6 BY MR. HAGER:

7 Q Mr. Broom, I would like to go on now to discuss your  
8 testimony which appears at pages 30 to 31. Referring now to  
9 Mr. Swayze and the comprehensive investigation which was  
10 undertaken pursuant to that incident.

11 Do you know what the investigation referred to in  
12 your testimony checked whether there had ever been a confron-  
13 tation over quality assurance and construction issues between  
14 Mr. Swayze and Mr. Fraley?

15 BY WITNESS BROOM:

16 A I really --

17 Q Prior to the incident.

18 BY WITNESS BROOM:

19 A Mr. Hager, I believe that that type of questioning  
20 was covered by some of the discussions with some of the  
21 witnesses, or other people interviewed, or in some of their  
22 statements.

23 I don't remember -- I believe that that matter was  
24 covered, although I don't think there was any plan developed  
25 with that as a specific item on it to investigate.

12-15

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

What I'm trying to say is I believe in inter-  
viewing these people and taking statements from a number of  
people, there are comments that address that subject. I don't  
know that that could be characterized as a formal part of an  
investigation.

- - -

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-3445

13-1 1 Q Would you know the results of however you  
STP 2 characterize it, as a formal part of the investigation or  
lb 3 simply interviews that touched on the subject, and would you  
4 know the results of that issue of the investigation?

5 BY WITNESS BROOM:

6 A There may have been a statement that in the past  
7 Mr. Swayze and Mr. Fraley had disagreed about something  
8 related to civil work, but in general, I do not believe  
9 there is an allegation or statement or anything to indicate  
10 that there was any previous serious cause for concern about  
11 the relationship between these two gentlemen. I've read all  
12 that documentation some time back, and I don't recall specific-  
13 ally, but I do not remember there being anything of significance  
14 in that regard.

15 Q Dr. Broom are you familiar -- I don't know if  
16 you're familiar here with the numbers of the I&E reports,  
17 but would you be familiar with I&E Report 78-13?

18 MR. NEWMAN: Mr. Hager, what exhibit number is  
19 that?

20 MR. HAGER: It's Staff Exhibit No. 9.

21 MR. NEWMAN: Thank you.

22 (Pause.)

23 JUDGE BECHHOEFER: You may proceed.

24 MR. HAGER: Are we back on the record?

25 JUDGE BECHHOEFER: Yes, back on the record.

1 BY MR. HAGER:

2 Q Dr. Broom, I think you just mentioned, while we  
3 were off the record, that you had had an opportunity to  
4 puruse this document. Does this document concern a meeting  
5 between HL&P representatives and the NRC concerning, among  
6 other things, the morale of STP site QA/QC personnel?

7 BY WITNESS BROOM:

8 A Yes, it does.

9 Q And it is dated -- the meeting took place on  
10 August 15, 1978?

11 BY WITNESS BROOM:

12 A August 15th, 1978.

13 Q Do you know at what time Brown & Root became  
14 aware of this meeting and its subject matter?

15 BY WITNESS BROOM:

16 A I don't know the date on which we were aware of  
17 it. I would assume fairly soon after the meeting.

18 Q Do you know whether Brown & Root had become  
19 aware of this meeting at the time of the investigation of  
20 Mr. Swayze?

21 BY WITNESS BROOM:

22 A I could not be positive, but I would believe we  
23 were aware of it.

24 Q Would this awareness have caused greater sensitivity  
25 by Brown & Root for a possible conflict between a construction

1 personnel and a quality assurance person in the context that  
2 the Fraley/Swayze incident?

3 BY WITNESS BROOM:

4 A Mr. Hager, I don't believe so. I think that if  
5 an incident occurred, similar to the earlier one we were  
6 discussing of confrontation between someone from civil  
7 construction and QA/QC, one might draw a connection.

8 In the case of this particular incident, it was  
9 not that type situation at all. It was a statement by  
10 Mr. Fraley that Mr. Swayze had solicited a bribe or favors  
11 for some type of unprofessional activities, not doing his  
12 inspections properly, or something, I suppose.

13 We had a situation of one person's word against  
14 another person's word and we were attempting to resolve that  
15 matter when we came to the situation where Mr. Swayze would  
16 not cooperate with us further, and we were left with a  
17 paradox on our hands. We can't leave a charge like that  
18 hanging, and we do expect the full cooperation of our employees  
19 when investigating matters of that nature. I don't see the  
20 connection between that circumstance and the matters covered  
21 in this inspection report. We were aware of morale problems  
22 among the QC inspectors. We -- I believe shortly after this  
23 report was issued, embarked on a number of actions to improve  
24 the morale of inspectors. I believe information concerning the  
25 actions that we were going to take was transmitted to the NRC.

1 I don't remember the precise timing, but it's in the records,  
2 and I believe within a very short period of time, as I recall,  
3 November of 1978 -- and I could be wrong about that date,  
4 I can check it out -- the NRC came back and reported that we  
5 were implementing the actions that we had talked about, which  
6 included providing field offices instead of gangboxes for crafts  
7 to hold their meeting or writing up their reports on and  
8 various things that contribute to morale among the troops.

9 I don't see the direct connection between that  
10 report and the situation we found ourselves in the case of  
11 Mr. Swayze faced with.

12 Q Now, you have spoken that you were faced with a  
13 situation where there was a question of one person's word  
14 against another. Do you have any other corroboration with  
15 Mr. Fraley's word other than his simple allegation against  
16 Mr. Swayze?

17 BY WITNESS BROOM:

18 A Of the charges made --

19 Q Of the charges.

20 BY WITNESS BROOM:

21 A -- by Mr. Fraley against Mr. Swayze?

22 Q That is correct.

23 BY WITNESS BROOM:

24 A No, the conversation apparently allegedly took  
25 place in a pickup truck while the two of them were alone on



1 the job site, and no one overheard those conversations other  
2 than the two participants, according to Mr. Fraley.

3 Q Did Mr. Swayze deny that he had offered --  
4 excuse me -- that he had solicited a bribe from Mr. Fraley?

5 BY WITNESS BROOM:

6 A Yes, he did.

7 Q Was that a categorical denial?

8 BY WITNESS BROOM:

9 A I believe so.

10 Q Now, you stated in your testimony that Mr. Swayze  
11 refused to fully cooperate in the investigation, and then you  
12 stated or to give a sworn statement. Could you say in what  
13 way he failed to cooperate other than his failure to get a  
14 sworn statement?

15 BY WITNESS BROOM:

16 A That was what I meant to imply when I said he  
17 refused to cooperate. The manner in which we, as management  
18 of an engineering construction firm, or I guess most any other  
19 kind of business are faced with matters like this and have  
20 to proceed using the tools that are at our disposal, and that  
21 includes interrogation of the people that are involved,  
22 requiring them to make sworn statements under oath, if  
23 necessary, to submit to polygraph examinations, and when an  
24 employee refuses to cooperate in an investigation like this,  
25 it poses a very severe problem for us because we are not the

1 court. We are not a law-enforcement agency. But we are  
2 expected to, I suppose, dispense justice, as it were, and be  
3 equitable an air to our employees. When we're confronted  
4 with an allegation of this nature that can have serious impact  
5 on whether we are meeting our obligations under the Nuclear  
6 Regulatory Commission requirements, Appendix B, other commit-  
7 ments and so on, we obviously have to make sure that that  
8 condition does not exist -- the alleged conditions do not  
9 exist -- that that kind of behavior is not going on. And, so,  
10 we have to pursue those types of steps in the course of our  
11 investigation, and when an employee refuses to cooperate with  
12 us, it may be uncomfortable for him at times. We recognize  
13 that, and if he fails to recognize his responsibility to  
14 assist the company in pursuing such matters as far as is  
15 necessary to get to the bottom of things, we have to judge that  
16 as not fully cooperating with us and we are at the end of our  
17 rope; we can't pursue things any further.

18 At that time, because of that type of situation,  
19 we terminated Mr. Swayze, and we terminated him because --  
20 I believe that the reason stated was that we had lost confi-  
21 dence in him to hold a position of responsibility on the  
22 project, words to that effect.

23 Q Just as a matter of clarifying your response, was  
24 there any other form of cooperation that the company was looking  
25 for, other than this signature or this sworn statement that

1 Swayze failed to perform?

2 BY WITNESS BROOM:

3 A I believe that was the only thing that we had asked  
4 him to do at that time. As I indicated to you earlier, these  
5 types of investigations are, generally speaking, fairly simple.  
6 When it's a case where you have one person's word against  
7 another, there are no other witnesses, you seek to get supporting  
8 information about the people. You seek to ask both of them  
9 the circumstances, then you pursue that to a sworn statement  
10 and you pursue it to a polygraph examination. Generally, at  
11 that point, you sit back and regroup and analyze the information  
12 and the data you've been able to obtain and decide where you  
13 go from there.

14 In many cases, this is a tough management decision  
15 at that point. Unfortunately, that's the way the world is.

16 Q Did Brown & Root administer the polygraph  
17 examination to Mr. Fraley?

18 BY WITNESS BROOM:

19 A No, we did not.

20 Q Did --

21 BY WITNESS BROOM:

22 A I don't believe we did. To my knowledge, we did  
23 not.

24 Q Did Brown & Root take into consideration that the  
25 allegation of bribery, soliciation of a bribe so as to undermine

14-8

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

1 the quality of the nuclear power project might have criminal  
2 implications for the person so accused?

3 BY WITNESS BROOM:

4 A I don't know whether we considered criminal  
5 implications of that or not. I guess -- I'm not an attorney,  
6 and I don't know what it is you're talking about.

7 Q Well, I'm not asking your opinion or anything else  
8 about the legal -- I'm just saying, whether or not Brown &  
9 Root considered the possible criminal implications of such a  
10 charge with relationship to Mr. Swayze's refusal to sign a  
11 sworn document with regard to those allegations, whether this  
12 was considered or not by Brown & Root.

13 MR. NEWMAN: Mr. Chairman, I'm going to object to  
14 that question because I don't think it's susceptible of a yes  
15 or no answer. It's in about three or four parts.

16 If the simple question is did you, Mr. Broom,  
17 consider this as a matter appropriate for referring to  
18 authorities in terms of a criminal investigation, that question  
19 can be asked. I think it's been asked and answered. The  
20 answer was no, and as far as I can see now, there is an  
21 effort to rephrase the question again and it's asked and  
22 answered.

23 MR. HAGER: I think the witness suggested a  
24 possible confusion in the question when he said I'm not a lawyer  
25 and I wanted to be sure that I was only addressing the question

1 of whether or not this issue was considered by Brown & Root.  
2 I wasn't asking the witness' legal opinion on whether or not  
3 they --

4 MR. NEWMAN: Mr. Chairman, I'm not clear, whether  
5 he considered it or whether Brown & Root --

6 MR. HAGER: No, whether Brown & Root considered the  
7 possible criminal implications of an allegation of solicitation  
8 of a bribe that would undermine the quality of the nuclear  
9 power project.

10 This is a yes-or-no question, whether he knows  
11 whether or not this was considered by Brown & Root.

12 MR. NEWMAN: There is just no foundation for the  
13 question. It has not been established that the matter involved  
14 concerned anything to do with a criminal offense.

15 MR. HAGER: This is the question which would be  
16 the foundation for that.

17 I don't intend to ask that question. I asked  
18 whether or not Brown & Root considered this in assessing the  
19 importance of Mr. Swayze's refusal to sign a sworn statement  
20 in this context.

21 MR. NEWMAN: Well, look, if the witness understands  
22 that question, let's just get on with it it. It's just one --

23 JUDGE BECHHOEFER: What I'm saying is -- if the  
24 witness understands, he may answer, but I'm not positive I  
25 understand.

1 MR. NEWMAN: There's generally one person in the  
2 room who understands one of the questions.

3 JUDGE BECHHOEFER: Dr. Broom, do you understand  
4 the question or not?

5 WITNESS BROOM: No, sir, I'm afraid not. I'll  
6 be glad to try to answer the question if you will restate it.

7 BY MR. HAGER:

8 Q Did Brown & Root consider the possible criminal  
9 implications of the allegations against Mr. Swayze in assessing  
10 the importance and the weight to be given to his refusal to  
11 sign a sworn statement with regard to those allegations?

12 BY WITNESS BROOM:

13 A I think I answered that earlier by saying I'm  
14 not sure.

15 (Laughter.)

16 Q We will maintain that on the record.

17 BY WITNESS BROOM:

18 A My answer is the same. It is, I'm not sure.

19 I will add that one of our legal -- one of our  
20 lawyers was a member of the group that was investigating this  
21 matter. I would assume that he's aware of the flaw and that,  
22 you know, if there is any consideration that we should have  
23 given in that area, perhaps. But, I would like to remind  
24 you of what I said earlier.

25 We had two people with conflicting statements,

1 and the allegation was made by one person and the other person  
2 denied it.

3 I repeat, I'm not a lawyer and I don't know  
4 whether that constitutes an instance of bribery or not.

5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 554-2345

---

1 Q Would you simply tell us who was the lawyer who  
2 was involved in that?

3 BY WITNESS BROOM:

4 A As I have stated earlier, the attorney involved  
5 was Mr. W. A. Brown.

6 Q Very good. Thank you. I think that's already in  
7 the record.

8 Now, on the question of the solicited bribe -- let  
9 me back up. Are you familiar with Mr. Swayze's work history  
10 at Brown & Root?

11 BY WITNESS BROOM:

12 A I'm familiar with it only by reviewing records.  
13 I don't have personal knowledge of his work habits or his  
14 performance.

15 Q Do you know, from your reviewing the records, when  
16 he came on the project?

17 A I can't give you a date, but very early. He was  
18 one of the first few QC inspectors employed there, as I  
19 remember.

20 Q Would it be fair to say if not the first; is it  
21 your memory he may have even been --

22 BY WITNESS BROOM:

23 A I really don't remember if he was the first, but  
24 he was one of the very first, I'm sure.

25 Q Now, did Brown & Root consider a solicitation of a



15-2  
1b

1 bribe by one of its most experienced quality control  
2 inspectors a plausible act in the context of the work out at  
3 Brown & Root?

4 BY WITNESS BROOM:

5 A I don't consider the solicitation of a bribe by  
6 any employee of Brown & Root a plausible act. It's incredible  
7 for me to believe that our employees do that. They may very  
8 well do it on occasion, but I certainly don't expect them to,  
9 our company doesn't expect them to. I hope we don't employ  
10 people who will do those kind of things.

11 Obviously, when an employee is accused of that,  
12 it's a surprise, it's a matter of concern, and certainly if it  
13 proves to be true it's a matter of disappointment to us.

14 Q Was there any reason to believe, was there any  
15 reason to believe that a Brown & Root employee would pay such  
16 a bribe out of his own pocket? Was there any reason for any  
17 quality assurance inspector out at the plant to believe that  
18 a construction employee would actually deliver on such a  
19 solicitation, pay such a bribe out of their own income, out  
20 of their own pocket?

21 BY WITNESS BROOM:

22 A Mr. Hager, from what I understand of the situation,  
23 if the statements that Mr. Fraley made were true, I don't  
24 believe it would have involved him paying something out of  
25 his pocket. As I understand his characterization of the

1 conversation in the pickup truck, it was a request for him  
2 to be invited on some hunting trips or have a boat built for  
3 him or being taken on fishing trips or things like that, as  
4 I remember it.

5 Q Now, in assessing the plausibility of this  
6 accusation made against Mr. Swayze, did Brown & Root investigate  
7 how such a bribe might have been paid, if not out of the pocket  
8 of Mr. Fraley himself?

9 MR. NEWMAN: Mr. Chairman, the witness has just  
10 answered the question why he would not expect the alleged bribe  
11 to have been paid out of Mr. Fraley's own pocket. It's asked  
12 and answered.

13 MR. HAGER: It's a different question, Mr. Newman.

14 This is, if not out of Mr. Fraley's pocket, did  
15 Brown & Root investigate how it might have been paid in some  
16 other way in assessing the plausibility of the experienced  
17 inspector soliciting a bribe.

18 JUDGE BECHHOEFER: I think he just answered that,  
19 too, in relation to the hunting trips and the fishing trips.

20 MR. HAGER: Well assuming that these were going to  
21 have to be paid for, a boat and fishing trips and so forth,  
22 would have to be paid for by somebody, and if not out of the  
23 pocket of the individual employee, then I'm asking how else  
24 would it have been paid.

25 (Bench conference.)

1 MR. NEWMAN: I'm not going to object, because I  
2 want to get this thing over with.

3 The question is vague and it's speculative and it  
4 shouldn't be allowed --

5 JUDGE BECHHOEFER: The witness can answer it if  
6 he can.

7 BY WITNESS BROOM:

8 A Mr. Hager, all I can do is speculate. If you  
9 want me to speculate, I will do that.

10 Q Yes.

11 BY WITNESS BROOM:

12 A I would presume that he would have to get  
13 Mr. Swayze invited to go on a hunting trip or fishing trip with  
14 someone or he would have to take him on a boat or a hunting  
15 lease. If he had one, if that involved some expense, I guess  
16 that would be out of his own pocket. I really don't know.  
17 I really don't know what was the subject of the discussion,  
18 and all I know is just the facts that were related.

19 As a matter of fact, I believe that Mr. Fraley  
20 stated that, you know, it just didn't seem to make sense that  
21 this type of -- that he would be expected to do something  
22 like that, as I remember the way Mr. Fraley characterized the  
23 incident. He was baffled by the situation. I'm not sure he  
24 clearly understood the intent, except he had been asked to do  
25 some favors or something like that in return for Mr. Swayze

1 signing off on things or not performing inspections or, at any  
2 rate, not fully performing his duties.

3 Now, while you ask me to speculate, I will speculate  
4 further.

5 I can't possibly imagine what that would do for  
6 Mr. Fraley.

7 Did Brown & Root investigate, given this  
8 impossibility of doing anything for Mr. Fraley and in light  
9 of Mr. Swayze's long experience in quality inspection, did  
10 Brown & Root make any investigation as to the situation out at  
11 the site as to possible bribes between construction and quality  
12 assurance people, whether this had gone on in the past, that  
13 Mr. Swayze might expect to actually receive something of  
14 value?

15 BY WITNESS BROOM:

16 A Yes. As a part of this investigation, contained  
17 in several statements that were taken, those questions were  
18 asked, I believe. At least, there was reference to the fact  
19 that Mr. Swayze had, on -- I believe it's fair to say -- many  
20 occasions, made reference to small favors: a bottle of whiskey  
21 or a beer or a six pack or these kinds of things.

22 In terms of if that would come my, things would go  
23 a little easier, that kind of thing. And I believe I'm correct  
24 in saying that everyone that had overheard those kinds of  
25 comments had taken them as just -- just talk. Just idle

1 remarks without any real intent behind them.

2 That is the only thing that came to our knowledge,  
3 and I don't judge that to be an accusation of him trying to  
4 get whiskey or beer.

5 Other than those remarks, I don't recall any  
6 information about anybody asking for and receiving favors on  
7 the job.

8 Q Did the Brown & Root investigation uncover  
9 information about other quality assurance/quality control  
10 personnel making similar kinds of bantering and jokes about  
11 favors?

12 BY WITNESS BROOM:

13 A No, sir.

14 Q You uncovered no other joking of that kind on the  
15 site?

16 BY WITNESS BROOM:

17 A Not that I recall. That was the only name mentioned  
18 in conjunction with such remarks.

19 Q What was the difference, I might ask, between the  
20 earlier incidents of joking and the incident Mr. Fraley attempted  
21 to turn into an allegation of something real? How was Brown &  
22 Root able to distinguish between the two?

23 BY WITNESS BROOM:

24 A Brown & Root did not distinguish between the two,  
25 Mr. Hager. Mr. Fraley distinguished between the two.

1 As he described the incident, it was very clear  
2 to him that this was not a joke, that it was a very, very  
3 serious discussion. It was, perhaps, even threatening in  
4 nature in that if you don't do these things for me -- if you  
5 do do these things for me, I'll do such and such,  
6 and if you don't, I'll make it rough on you. The words, and  
7 I can't quote verbatim Mr. Fraley's statement, but the words  
8 were very clear that this was not -- if what Mr. Fraley said  
9 were true -- this was not some passing comment that you ought  
10 to slip me a bottle of whiskey or something like that.

11 Q How would Mr. Swayze be able to make it rough on  
12 Mr. Fraley, in your understanding?

13 BY WITNESS BROOM:

14 A I don't know. I presume by rejecting work, by  
15 giving him a hard time, by giving him a hard time, by making  
16 it difficult for him to accomplish his work. I guess that's  
17 the conclusion I would reach, but I don't know.

18 Q Given the procedures out at Brown & Root, would  
19 have been possible for an inspector to, for very long, anyway  
20 make such kinds of inspections that were faulty and over-  
21 restrictive that would give Mr. Fraley these kinds of troubles?

22 BY WITNESS BROOM:

23 A I would certainly hope not, and I don't believe  
24 that that would be possible. I think that that matter, if  
25 properly handled, would be referred to the supervision on the

1 job site and looked into and that matter corrected.

2 Q Was there any reason for an experienced inspector  
3 like Mr. Swayze to believe that he could do this, that he  
4 could make things hard for Mr. Fraley given his intimate  
5 knowledge of the procedures of Brown & Root out at the plant?

6 BY WITNESS BROOM:

7 A I think, Mr. Hager, you're asking me to tell you  
8 why Mr. -- I guess in my opinion -- why Mr. Swayze made remarks  
9 that he was alleged to have made, and quite frankly I don't know.  
10 For the past several minutes, all I've been doing is speculating  
11 about what may or may not have occurred in the discussions  
12 between these two individuals.

13 I think I've stated, but I'll state again, I  
14 don't know what happened between these two individuals. I know  
15 that there is an accusation by one that a bribe was solicited  
16 and a denial on the part of the other person. That's all I  
17 really know. Why Mr. Swayze would think he could get away with  
18 -- well, in the first place, I can't imagine a decent, honest  
19 QC inspector making such a request. It really doesn't make any  
20 sense to me. I suppose people do that kind of thing though,  
21 even though they're illogical.

22 Q We're in the context of simply talking about  
23 plausibility. Even if you assume that someone isn't decent  
24 and normal, what's the plausibility of success? But I'm  
25 going to move on. That doesn't call for a response, I don't

1 think, unless you choose to respond.

2 I would like to move on to another incident involving  
3 the dismissal of quality assurance/quality control people.

4 Are you familiar with an incident involving a  
5 Mr. Jim Green or A Jim Finucan?

6 BY WITNESS BROOM:

7 A Yes, sir, I am.

8 Q Could you describe what that incident entailed?

9 BY WITNESS BROOM:

10 A Yes, I can. I personally was involved in that  
11 situation, and I'm calling on my memory. I have not reviewed  
12 any documents associated, so forgive me if I slip a date.

13 We can start at the end, if you would like.

14 Q That's fine.

15 BY WITNESS BROOM:

16 A Mr. Finucan and Mr. Green were terminated on my  
17 orders for using controlled substances -- or allegations of  
18 use of controlled substances on the job site during working  
19 hours.

20 Q Who made the allegation in that case?

21 BY WITNESS BROOM:

22 A The situation began by an employee who was -- I don't  
23 know whether you want me to use names of all of the people  
24 involved --

25 Q No, the position is what I'm most concerned with.



1 I think we could use the names here as well.

2 BY WITNESS BROOM:

3 A Let me try it that way, because I'm not sure that  
4 the names are germane and it could be that somebody could get  
5 hurt unnecessarily. I don't think that would occur, but let  
6 me see if I can handle it with positions and if we get too  
7 involved, we can talk about names.

8 This involves a group of mechanical discipline  
9 inspectors. I believe that the position of Mr. Green at the  
10 time was a lead inspector. I might be incorrect in that  
11 regard. Of this group of inspectors we're talking about,  
12 two or three of them had held a lead position in various  
13 assignments from time to time and at this particular time  
14 I believe Mr. Green was a lead inspector.

15 There were several inspectors, along with  
16 Mr. Green, working out of an office -- office meaning a  
17 little aluminum building enclosure inside one of the plant  
18 structures. One of the employees working in that area, an  
19 inspector, came forward to site QA management one day and said  
20 that people working in his work group, that is, in that office  
21 area, were using amphetamines on the project and that, as I  
22 recall the statement, it had started several weeks -- a few  
23 weeks prior to that, as I remember it there was about a month  
24 period of time involved.

25 Your question was who made the allegation, and

1 I think I've defined the structure such that it was an inspector  
2 in the same area, perhaps one supervised by Mr. Green if not  
3 an inspector doing the same type of work in the same general  
4 area.

5 Q Was the allegation confirmed, corroborated,  
6 duplicated by anybody other than this one individual?

7 BY WITNESS BROOM:

8 A Yes, it was.

9 Q And who were those -- that person or those people?

10 BY WITNESS BROOM:

11 A The allegation, and I am simplifying now a process  
12 that took several weeks and which I was personally involved to  
13 fully flesh out.

14 The allegation was ultimately corroborated by either  
15 four or five employees. I've forgotten. At least four employees.

16 Q Did Brown & Root, after obtaining this confirmation  
17 at any time contact law enforcement authorities concerning this  
18 matter?

19 BY WITNESS BROOM:

20 A I believe that our site security people talked to  
21 the Bay City Police or the Sheriff's Office. I'm not certain  
22 of that. In such cases, that is normally the practice, but  
23 I'm not positive in that particular case. I believe so.

24 Q Who would have been responsible for site  
25 security under the Brown & Root organization?

BY WITNESS BROOM:

1  
2 A The site security is not a Brown & Root employee,  
3 and I cannot remember the name of the man --

4 Q What organization? If it's difficult to remember  
5 the name, if you could just state the name of the organization  
6 who is responsible.

7 BY WITNESS BROOM:

8 A Burns Security provides the site security and that  
9 is that -- that group is supervised by an HL&P employee,  
10 I believe, who is on site. I don't remember the members of that  
11 team.

12 Q Fine.

13 BY WITNESS BROOM:

14 A I do remember the name of a Burns Security guard or  
15 supervisor that was involved in one of the early searches or  
16 investigations into the matter, but I don't think he would have  
17 been the man to contact the Sheriff's Office or the Police  
18 Department. I'm not sure, he might have.

19 Q I thank you for trying to recall that information.  
20 Were the allegations against Mr. Finucan and  
21 Mr. Green ever confirmed?

22 BY WITNESS BROOM:

23 A I'm sorry?

24 Q Were the allegations ever confirmed by Brown &  
25 Root? Did Brown & Root ever find any controlled substance in

1 the possession of Mr. Green and Mr. Finucan?

2 BY WITNESS BROOM:

3 A No.

4 Q Were the allegations confirmed in any other way?

5 BY WITNESS BROOM:

6 A Other than by being substantiated by four or five  
7 other people.

8 Q Was any substance ever found, any suspicious  
9 substance, ever found?

10 MR. REIS: Mr. Chairman --

11 MR. NEWMAN: Mr. Chairman, I'm going to object  
12 as to --

13 MR. REIS: -- I'm going to object as asked and  
14 answered.

15 MR. HAGER: Okay. I'll strike that.

16 BY MR. HAGER:

17 Q Did you --

18 MR. NEWMAN: My objection, Mr. Chairman, is  
19 perhaps not the same as Mr. Reis'. I don't --

20 MR. HAGER: I will strike it regardless of the  
21 nature of the objection.

22 MR. NEWMAN: Okay.

23 JUDGE BECHHOEFER: And we can go on, as it was  
24 withdrawn.

25

1 BY MR. HAGER:

2 Q Mr. Broom, were you ever involved in a deposition  
3 or a questioning of Mr. Finucan concerning this matter?

4 MR. NEMWAN: Mr. Chairman, I am going to object  
5 now because I think we're chasing down the details of one  
6 investigation of one incident, and I fail to see where this  
7 cross-examination is going. To this depth, what it really  
8 has to do with the QA/QC function, there's nothing to tie it  
9 to anything that's before the Board.

10 JUDGE BECHHOEFER: Mr. Hager --

11 MR. NEWMAN: Counsel ought to be asked where he's  
12 going with this line.

13 JUDGE BECHHOEFER: I was just asking that. Where  
14 are you going?

15 MR. HAGER: Well, this is another situation where  
16 quality assurance people were terminated on less than fully-  
17 proven evidence and I'm simply trying to flesh out the record  
18 on that as to --

19 MR. REIS: Mr. Chairman, I'm going to object to  
20 it on that ground --

21 MR. HAGER: -- the witness' knowledge --

22 MR. REIS: -- unless it's shown that it has some  
23 effect on the work of the quality assurance staff or something  
24 else. Employers often terminate people, and unless we have  
25 some relevance to this proceeding, I don't see it.

1 MR. HAGER: The --

2 MR. REIS: We have an incident, apparently talked  
3 about with the drug charges. It doesn't seem to --

4 MR. HAGER: I only have about one or two more  
5 questions on this area before I leave it and I don't intend  
6 to be going any further with it.

7 (Bench conference.)

8 JUDGE BECHHOEFER: I will sustain the objection as  
9 to these details, and I don't think that's going to lead to  
10 anything that would be of relevance.

11 (Bench conference.)

12 JUDGE BECHHOEFER: You may proceed.

13 BY MR. HAGER:

14 Q I would like to go back now to Mr. Vurpillat's --

15 JUDGE BECHHOEFER: By the way, we want to quit in  
16 about five minutes. Do you have a -- are you starting  
17 something else?

18 MR. HAGER: This would be, what I am just about  
19 to go into would be more than five minutes. That would be a  
20 natural breaking point for me. I have terminated this line  
21 of questioning involving quality assurance people, and I'm  
22 moving into a completely different area.

23 MR. NEWMAN: May I inquire through the Chair,  
24 are we now through with Mr. Hager's interrogation of Dr. Broom  
25 and now going into Mr. Vurpillat?

1 JUDGE BECHHOEFER: No.

2 MR. HAGER: No, not at all.

3 MR. NEWMAN: Okay.

4 JUDGE BECHHOEFER: I think with that we will adjourn  
5 for the day.

6 Is there anything, prior to adjournment, that  
7 any party wants to raise?

8 (No response.)

9 JUDGE BECHHOEFER: If not, we will be back at  
10 9:00 tomorrow.

11

12 (Whereupon, 5:27 o'clock p.m., the hearing  
13 was adjourned, to reconvene at 9:00 a.m., June 4,  
14 1981, in this same location.)

15

16

17

18

19

20

21

22

23

24

25

---

This is to certify that the attached proceedings before the  
NUCLEAR REGULATORY COMMISSION  
HOUSTON LIGHTING & POWER COMPANY, ET AL.  
in the matter of:

South Texas Nuclear Project Units 1 and 2

DATE of proceedings: June 3, 1981

DOCKET Number: 50-498 OL; 50-499 OL

PLACE of proceedings: Houston, Texas

were held as herein appears, and that this is the original  
transcript thereof for the file of the Commission.

Lagailda Barnes  
Official Reporter (Typed)

  
Official Reporter (Signature)