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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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IN THE MATTER OF:

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INVESTIGATIVE INTERVIEW

LOCATION: GLEN ROSE, TEXAS

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BEFORE THE  
OFFICE OF INVESTIGATIONS  
U.S. NUCLEAR REGULATORY COMMISSION

----- x  
: Interview of:  
: LARRY D. NACE  
: ----- x

Comanche Peak Nuclear Power  
Station  
Glen Rose, Texas  
  
Wednesday,  
April 22, 1987  
1:15 p.m.

APPEARANCES:

For the Commission:

DAN MURPHY  
LEN WILLIAMSON  
MARK REINHART



P R O C E E D I N G S

1  
2 MR. MURPHY: For the record, it is now 1:15  
3 p.m., April 22nd, 1987. This is an interview with Mr. Larry  
4 D. Nace who is employed by Texas Utilities Company--

5 INTERVIEWEE: Electric.

6 MR. MURPHY: Electric Company?

7 INTERVIEWEE: Let's back up. The acronym is  
8 TU Electric.

9 MR. MURPHY: Yeah.

10 INTERVIEWEE: Okay. And officially, it's the  
11 Texas Utilities Companies system.


12 MR. MURPHY: The location of the interview is  
13 the Comanche Peak's nuclear site in Texas. Conducting the  
14 interview are D.L. Williamson, Mark Reinhart, and Dan Murphy.  
15 And as agreed, this is being transcribed by court reporter.  
16 The subject matter of this interview concerns TVA's March  
17 20th, 1987 response to the NRC regarding their compliance  
18 with 10 CFR 50, Appendix B.

19 Mr. Nace, would you stand and raise your right  
20 hand, please?

21 Whereupon,

22 LARRY D. NACE,

23 having been sworn to tell the truth, the whole truth, and  
24 nothing but the truth, was interviewed and answered as  
25 follows:



1 BY MR. WILLIAMSON:

2 Q Mr. Nace, before we start the interview,  
3 would you give us a brief summary of your educational and  
4 employment experience?

5 A Educationally, Bachelor of Science degree in  
6 Science from the Pennsylvania State University; Master's  
7 degree in Electrical Engineering from the Naval Post Graduate  
8 School; Master's degree in Business Administration from  
9 Northeastern University.

10 Professionally, 20 years in the Navy, most of  
11 that in the Navy Nuclear Submarine Program. Following 20  
12 years' service with the Navy, I spent approximately nine years  
13 with Stone & Webster Engineering Corporation in Boston,  
14 Massachusetts, and for the last year have been employed with  
15 TU Electric.

16 Q Thank you.

17 During some of our other interviews with  
18 Stone & Webster Corporation employees, they gave us a summary  
19 of the events leading up to Stone & Webster's involvement  
20 with TVA. And basically, they said they started with-- And  
21 correct me if I'm wrong. --a meeting held at the Welshire  
22 Harbor Club during-- They had-- Stone & Webster had an  
23 annual meeting, and it was held at the Welshire Harbor Club.  
24 And at that time, there was a confidential meeting regarding  
25 Stone & Webster involvement with TVA.

*Con*

1 A I have no knowledge of that.

2 Q Okay. When did you first become involved with  
3 the TVA projects? What were the circumstances?

4 A I became involved-- You're right, excuse me.  
5 I do remember that. There was an annual meeting, which was  
6 an annual planning meeting, at Wenchemere Harbor Club,  
7 Wenchemere, the end of October 1985.

8 During that meeting, Bill Matson approached  
9 me, and I was still assigned as a Stone & Webster project  
10 manager at Millstone 3 at the time. Bill Matson pulled me  
11 aside at that meeting and indicated that there was some  
12 discussion of setting up a short-term assignment at TVA to  
13 do a management assessment and that he would like me to head  
14 up the effort to get that team put together. And basically  
15 said he'd get back with me later, and that's the extent of  
16 the conversation at that planning meeting.

17 Q What happened after that?

18 A About-- About a week later-- a week or a  
19 couple of days later after we'd come back from that planning  
20 session, I was called again and given the scope of what the  
21 management assessment was supposed to be and the direction  
22 to put together a team of about-- I can't remember the size,  
23 but it was about six or seven people.

24 Q Okay.

25 A I came back from Millstone to the Boston

1 office. We recruited some people from the Boston office  
2 and the Cherry Hill office to form that team and-- I can't  
3 remember the timing now, but it must have been the first--  
4 I think the 10th of November, about the time frame, is when  
5 we arrived at Chattanooga. So, somewhere between that end-  
6 of-October meeting, and I can't remember when that was, and  
7 the 10th of October, we sat in the Boston office with occa-  
8 sional trips to the Washington office to put together the  
9 review plan.

10 Q Was Mr. White part of that group originally?

11 A Not initially.

12 Q How did he come to be a part of the group?

13 A Sometime before the 10th-- It must have been  
14 just a couple of days before the 10th, he was brought in.  
15 And I can't remember whether it was during one of the visits  
16 to Washington or whether it was in the Boston office, but he  
17 was brought in and said that he was going to be a part of  
18 the team and then eventually became the head of the team.

19 Q Who made the arrangements-- Who made the  
20 initial contact with TVA, do you know?

21 A I don't know for a fact. I believe, from what  
22 I heard or otherwise picked up, I believe it was Bill Matson.  
23 But I don't know that for a fact.

24 Q Let me ask-- interject before we get too  
25 far away from this: You said you were called in and given

1 scope and direction for this assessment. Who provided that  
2 to you?

3 A Bill Matson and-- Boy. The original assign-  
4 ment was Bill Matson, but Ed Siskin-- Ed Siskin was involved,  
5 and at some point Walt Sullivan became involved but I don't  
6 know exactly what the timing for them are.

7 Q And to the best of your memory, what was your  
8 marching orders, as it were, the scope and direction for  
9 this review?

10 A As I understood it, Matson and possibly with  
11 others-- I really don't know. Siskin may have been with  
12 them, but Bill Matson had met with Hugh Parris. And the  
13 upshot of that meeting was that Parris asked us to put together  
14 a team to take a look at four or five or six different areas  
15 of the plant. It was records management, equipment qualifi-  
16 cations, welding problems at Watts Bar, engineering assurance--  
17 It seems to me there were two or three other areas, also.

18 Q Design control and configuration?

19 A Configuration management was one of them.  
20 Design control is part of EA, I believe.

21 Q How about Quality Assurance organization?

22 A No, that wasn't part of it.

23 Q Okay. Good memory for remembering as many of  
24 those as you did.

25 A Did I get them all?

1 Q Yeah.

2 A Now you're going to ask me who the members of  
3 the team were.

4 Q Well, I think we have that.

5 A Okay.

6 Q We're going to ask you to look over some  
7 documents here.

8 But one of the things that's been brought up  
9 by several people we've talked to was that we've been told  
10 that White took-- became in charge of the team.

11 A Right.

12 Q Some people have told us that they don't think  
13 he was ever in charge. I mean, they thought that you were in  
14 charge throughout and that-- And I guess we're kind of  
15 curious. Did this happen in midstream, or was this pre-  
16 arranged? Was he going to be in charge at the time you went  
17 up there?

18 A I really can't remember the timing on that.  
19 What-- I don't recall him coming into the scene until some-  
20 time-- I'll say in the week before we went down there.  
21 That's not much of a window because that would be sometime  
22 between-- you know, like the 3rd of November, and I can't  
23 remember when that meeting was in Wenchemere. But it must  
24 have been the very end of October.

25 But I basically put together the review team,





1 put the-- developed the review plan and led the reviewers  
2 while we were doing the review. And Steve was the guy who  
3 basically did the interface with Hugh Parris-- Who was the  
4 deputy at the time?

5 Q Chuck Mason? Bill Cottle?

6 A No.

7 Q Darling?

8 A Darling was one of them, but he left--  
9 Darwin? No. Maybe it was Mason. There was a very basic  
10 organization chart that TVI had at that time, which is a  
11 one-pager. It showed Hugh Parris at the top and a Christmas  
12 tree. And I thought there was a licensing guy in there.

13 A Hoffman?

14 Q Hoffman, yeah. And White basically dealt with  
15 the interface with those people and coordination of the--  
16 There was a Beta involvement someplace in the periphery.  
17 They were there at the same time, although our team and the  
18 Beta team hardly ever crossed paths. So, I guess if you  
19 wanted to look at it structurally, I think Steve had a two-  
20 prong organization, and I had the one review team. And Wegner  
21 and ~~Bronski~~<sup>BRODSKI</sup>-- Wegner and whoever as Beta was another part  
22 of the effort.

23 Q Do you have any idea why White was selected  
24 or how the selection process took place?

25 A No.

1 Q Yeah, I wanted to ask you: You mentioned two  
2 teams. I have a couple of things that probably might refresh  
3 your memory. This is undated, but it's a-- Title, TVA  
4 Study/Findings. And I believe this is a document that has  
5 probably been used by you to brief the board, which contains  
6 some of the results of your review.

7 Now, as I understand it, there were two teams.  
8 One which included Mr. Burns and Mr. Freeman, Mr. Williams,  
9 Mr. Rick Byrnes, B-y-r-n-e-s, Larry Wiess, and Hoffman. You  
10 headed that team.

11 A Yes.

12 Q And then, apparently, as you mentioned earlier,  
13 simultaneously there was a group that included Mr. White,  
14 Mr. Wegner and Mr. Miles.

15 A Yes.

16 Q Is that correct?

17 A Yes.

18 Q And did you say that you were looking at  
19 different issues? Did you have any interface with these  
20 people during the time that you were down there?

21 A The only interface that we had with the Beta  
22 team was at the very first meeting.

23 Q I think the dates of that review are on there,  
24 also.

25 A It says the 11th through the 22nd. So, I

1 wasn't far off.

2 Q No.

3 A The first day was in Chattanooga. In that  
4 first day, the Beta team and the SWEC team, my team plus  
5 White's, we were all in that introductory meeting. To the  
6 best of my knowledge, that's the last time I saw Wegner and  
7 Miles during that 10- or 11-day period.

8 Q Were you-- Your team, was it meeting daily  
9 to assess--

10 A Yes.

11 Q --the results of your review?

12 Were you briefing anyone on the results of  
13 these? I mean, was there someone there that you were  
14 required to brief or someone in Cherry Hill or Boston that  
15 you were briefing on the results of your review at the time?

16 A Occasionally. I'm trying to think now-- My  
17 team, we went from Chattanooga to Knoxville, as it says  
18 here, Sequoia, Watts Bar, and then Brown's Ferry.

19 Now-- And that was also-- There was a  
20 weekend in between there. And I think the weekend came, as  
21 I recall, between Sequoia and Watts Bar.

22 We were all together in Chattanooga. And then,  
23 as I recall, the Knoxville and the Sequoia, the team I had  
24 went one direction, and White, Wegner and Miles went another  
25 direction.

1                   Sometime, either the end of that week or the  
2 beginning of the next week, we did hook up with White for one  
3 briefing and then again at the end of the Brown's Ferry  
4 portion, I think the next day, we caucused but I can't remem-  
5 ber where, with White.

6           Q           So, Mr. White was briefed at least twice.

7           A           At least twice, to my recollection.

8           Q           Okay. As I mentioned earlier, they had the  
9 subject of-- the subject titles of your review, which you  
10 have a very good memory to have remembered all of those that  
11 time ago. What was your relationship with Mr. Robert Burns?

12          A           Robert Bur-- B-u-r-n?

13          Q           B-u-r-n, yes.

14          A           You mean during that period of time?

15          Q           Uh-huh.

16          A           Fairly close. I had known Bob for quite some  
17 time. I worked with him before.

18          Q           He was a team member.

19          A           He was a team member.

20          Q           You were his supervisor.

21          A           Yes.

22          Q           The results of your efforts, 11 days I think  
23 it was, was there a formal report written up, or is this  
24 what you have here in your hand as a formal report?

25          A           There was no formal report, per se. What we

1 had was a-- It ends up with a briefing paper. And I don't  
2 remember this one (indicating), but that was a long time ago.

3 Q Could that have been a document you used to  
4 give the review?

5 A It was not a document I used to actually give  
6 the briefing, to my knowledge. Why do I say that?

7 To my recollection, when I-- I briefed Parris  
8 and the team, and then I was called back a couple of weeks  
9 later and participated in a briefing with the board. To my  
10 knowledge, the briefing paper I used was all by category:  
11 Records management, here's what we found; equipment qualifica-  
12 tion, here's what we found. And so forth.

13 This looks like it would have some of the same  
14 information, but it's not <sup>Structured</sup> ~~Formalized~~ the way I used it.


15 Q So, you did have-- at the conclusion of this,  
16 you briefed Mr. Parris and some other members of his staff.

17 A Yes.

18 Q Do you recall your-- the conclusions you drew  
19 from your briefing and how you presented them to Mr. Parris  
20 and any recommendations you might have made?

21 A One, we did not make recommendations. I <sup>did</sup> ~~do~~  
22 not make recommendations.

23 Conclusions? Well, once, we had a-- you know,  
24 a list of issues under each of those headings. They were not  
25 <sup>Complimentary</sup> ~~complementary~~, and I really don't know exactly what I gave



1 him.

2 Some of these bullets on this document  
3 certainly fit what I may have told him, but this was not the  
4 format, to my knowledge.

5 Q I have some additional documents here that I  
6 think are possibly notes that were taken at some point in time  
7 during this review. And I don't know if these are any of your  
8 notes or not, but these are some-- Title: Exercise No. 1,  
9 Changes at TVA, 31 Weaknesses--

10 A Oh, I remember that.

11 Q Okay. Would those have been some of the  
12 things that were communicated to Mr. Parris?

13 A The way we operated as the review time,--

14 Q Okay.

15 A --for each day or each site visit-- Okay,  
16 we each had our areas that we were going to look at during  
17 that day. --we kept rough, handwritten notes of what our  
18 opinions or conclusions were reached that day. And then  
19 that night in the-- at the motel, wherever we happened to  
20 stay, we had a conference room, and we used business school  
21 case analyses of flip charts where we just put everything  
22 everybody opinioned, perceived, or concluded on the flip  
23 chart in felt-tip pen and tried to sort things out by cate-  
24 gory.

25 And we kept those flip charts, added to them

1 during the 10-day trip. At one of those evening briefings,  
2 we decided to summarize what it was we'd observed during the  
3 previous-- I think this was at the end of the Sequoia trip,  
4 but I'm not sure. So, he says, "Okay, let's take a look at  
5 everything we have up here in these flip charts." We had  
6 them taped all the way around the room. And, "Let's make  
7 some snap, hip-pocket decisions. If you were in charge and  
8 you had all these concerns, what would you do about fixing  
9 them?" Sort of a team-building exercise for the review team  
10 to try to get us focused on what were some problems or how  
11 we could categorize our findings. That was called "Exercise  
12 No. 1". This never went any further than that exercise,  
13 although we did use it again as a team the following week to  
14 try and continue focusing what our findings and conclusions  
15 were going to be.


16 Q Would these have been presented to Mr. White?

17 A I--

18 Q At either one of those briefings that you had  
19 with him?

20 A I don't know.

21 Q I guess what I'm trying to determine is the  
22 relationship for that period of time that you personally or  
23 your group was having with Mr. White. Two different, you  
24 know, groups looking at some of the problems. Can you  
25 characterize this for us?



1           A           Well, what kind of relationship. Given the  
2 fact that he had started out on a different travel route  
3 than us, there was not what I would call a close working  
4 relationship.

5                       On the other hand, I had dealt with Steve  
6 White in the past while we were in the Navy together.


7                       We did brief him-- I briefed him, like I said,  
8 I think it was at the end of the Sequoia trip. And this  
9 exercise was pretty close to that. It may have been the night  
10 before.

11                      And I-- As I do recall, when we did do the  
12 briefing, the flip charts were still taped around the wall.  
13 If you-- These things came off those flip charts. This came  
14 off the flip charts (indicating). "Strengths and weaknesses",  
15 they were all on the charts.

16                      I believe one of the flip charts we-- this  
17 came off of one of the flip charts that we wrote on as we  
18 had this team-building case study of what was given-- what  
19 would you do about it.

20                      Q           Were any of these bullets or suggestions  
21 communicated to Mr. Parris during your briefing with him at  
22 the end of your review?

23                      A           We certainly didn't talk to him about replacing  
24 Parris. Certainly, in the area of design-- design control,  
25 I believe we did talk about strengthening the Office of





1 Engineering Management. That's number 10 on the list here.

2 Other than that, I don't think any of this  
3 raw data really made it to the final report, given that the  
4 final report was a verbal report.

5 You've got to remember, this is a case study  
6 type ideas. Nothing that would certainly fit the category of  
7 a well-developed solution.

8 Q Uh-huh.

9 So, you had a-- At the end of your briefing--  
10 review, you briefed Mr. Parris and some of his staff. You  
11 returned to your office.

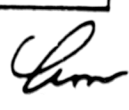
12 A Yep.

13 Q Which was in--

14 A At that time, I was still assigned to the  
15 Millstone site. So, like the 22nd when this was over--  
16 Well, that was a couple of days before Thanksgiving.

17 We briefed Parris somewhere in the-- I don't  
18 know, 5th to the 10th of December time frame, somewhere in  
19 there.

20 Between that time and whenever I was back in  
21 Chattanooga to brief Parris, I had been home Thanksgiving,  
22 back to the Millstone site, and in meetings with the team to  
23 put together a final briefing for White and then again with  
24 White in the Washington office as he was-- We had a briefing  
25 with White down there.



1 Q Okay. So, Mr. White, at some point in time  
2 betw-en the end of this and the next two or three weeks, I  
3 guess, became the senior SWEC representative for TVA? Is  
4 that what it was? Or-- I don't quite understand. You said  
5 you briefed him again later.

6 A Well, at that point in time-- Let's see.  
7 Somewhere in the--

8 Q I don't have a calendar for you.

9 A Well, I'm trying to remember the chronology.  
10 Because at some point in time there, it became more than--  
11 it became more than a two-week study. The original idea was  
12 to do the study and then put together a briefing for Parris.  
13 And that was going to be it.

14 And then somewhere in the-- I think, early  
15 December time frame, White became much more interested in  
16 and involved. I think he had been in communication with  
17 Parris on frequent occasions since that time. Since the time  
18 of the visit.

19 So, the follow-on debriefing of the team and  
20 the briefing of White became a-- White became very much more  
21 involved at that point in time.

22 BY MR. MURPHY:

23 Q But then, after that, you said sometime in  
24 betw-en the 5th and 10th of December, you went back and  
25 briefed the board.

1 A Yes.

2 Q What transpired?

3 A In between that period of time?

4 Q No, what-- At the board. At the briefing  
5 itself. I mean, who gave the briefing and...?

6 A Let's see. The three board members?

7 Q Yes, sir.

8 A Three board members and Hugh Parris were TVA.  
9 Steve White, myself, Bill Matson, and I believe Ed Siskin--  
10 I don't recall if Sullivan was there or not. I don't think  
11 he was, but I don't know. --met. I briefed the board on  
12 the results of the study or the survey that we had done and  
13 basically gave them the same briefing that I gave Parris  
14 earlier. And then White made some recommendations.

15 Following that, there was a-- you know, a  
16 two-way dialogue for a period of time. As I recall, it was  
17 kind of a long meeting. I think we flew-- As I recall, we  
18 flew down early in the morning and flew out late in the  
19 afternoon, so it was around a three- or four-hour  
20 meeting.

21 Q Okay. Let me ask you: During that meeting,  
22 did Mr. Parris have to leave to go make a conference call  
23 with all the plant managers? Do you recall that?

24 A No.

25 Q Do you recall ever, during that meeting, that

1 White had a chance to address the board alone without anybody  
2 else present?

3 A I can't remember it. During that period, I  
4 said there was a dialogue. There were people in and out,  
5 but there was no formal recess or something to go to the boys  
6 room. I don't recall if White had a meeting by himself or  
7 not.

8 Q Okay. Did White, at any point during that  
9 meeting, recommend to the board that he be appointed as  
10 TVA's nuclear tsar?

11 A No, no.

12 Q Did he recommend that Parris be replaced?

13 A Not to my knowledge.

14 Q Did he recommend any management changes?

15 A I don't believe so. I really can't remember  
16 now.

17 Q Okay. Do you know if, at any point in time,  
18 you were present or heard of White suggesting to Mr. Parris  
19 that he be appointed as the nuclear tsar?

20 A No.

21 Q Were you aware at the time that TVA had at  
22 least stated openly-- I know there was a Congressional  
23 hearing and at the Commission they were in the process of  
24 trying to identify a nuclear tsar.

25 A Yes, I do.

1 Q Did White ever tell you he was interested in  
2 that job?

3 A Not until after the board meeting, and then  
4 he really didn't say that. I don't ever recall White ever  
5 saying it in my presence, that he was interested in being  
6 nuclear tsar. Bill Matson from Stone & Webster on occasion  
7 advocated to White that he ought to apply for that job. But  
8 I never heard White acknowledge he was interested.

9 Q I only suggest that because, as I review--  
10 We've got, I guess, general notes and observations from a  
11 lot of people. One of the recommendations seemed like most  
12 everybody was that they replace Mr. Parris.

13 A Yes.

14 Q And if that's a-- I mean, a team of experts  
15 come up-- you know, well-qualified people come up with the  
16 decision that there's got to be some management changes, I  
17 was curious as to whether that was recommended to the board.

18 A We kind of shied away from that because, at  
19 that point in time, what my charter was, was to put together--  
20 to do a detailed study and come up with some constructive  
21 recommendations. Firing Parris or firing the licensing guy  
22 or firing the engineering guy or whoever is not a construc-  
23 tive way to solve a problem.

24 So, from my standpoint, I tried to steer away  
25 from replacing specific people, but tried to give them my

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1 views taking what they've got and making it work.

2 BY MR. WILLIAMSON:

3 Q Mr. Nace, if you would, please,--

4 A Uh-huh.

5 Q Could you be as precise as possible and tell  
6 us-- at least summarize what you told the board as a result  
7 of your review. And if you need this documentation--

8 A I have to think for a while.

9 MR. MURPHY: Let me show you this also.

10 A (Continuing by the interviewee) This may have  
11 been the-- may have been one of the outlines we had of the  
12 things we wanted to look at.

13 Q (By Mr. Williamson) What is that? Does that  
14 have a title?

15 A It says "Subjects to be Discussed". I can't  
16 be certain, but I think this was one of-- Each of us, when  
17 we were doing the trips around the country and visiting  
18 various sites, talking to various people, each of us had a  
19 script like this of things that we wanted to cover.

20 Q Okay.

21 BY MR. MURPHY:

22 Q Okay. I thought that's what it was, but when  
23 you mentioned previously you had them broken down by category,  
24 I thought maybe that's what you used for your briefing.

25 A No. But I'm trying to think from this. This

1 was either-- probably either Dave Freeman's or Bob Burns's  
2 himself. It was one of the check lists, if you will.

3 Let me see this other one. If we can figure  
4 out what it was we told them. Because I had about a three-  
5 or four-page talking paper at that time.

6 Q And as I understand it, you gave the presenta-  
7 tion, and then Mr. White made some opening remarks and/or  
8 closing remarks for the recommendations, and you gave the meat  
9 of the presentation and the results of the findings.

10 A Yeah.

11 Q Was any of the information from Mr. White's  
12 team used in your briefing to the board?

13 A Not in mine, no. I don't know about-- See,  
14 I'm having trouble remembering what Steve's recommendations  
15 were. But they were mainly along the lines of structurally.  
16 I think-- Let's try to do recommendations first.

17 As I recall, the thrust of his recommendations  
18 had to do with restructuring the nuclear operations. At  
19 the point-- this point in time, '85, they were very frag-  
20 mented. You know, purchasing reported <sup>to</sup> one manager. Engineer-  
21 ing had their own manager. And they reported at different  
22 points in the Christmas tree.

23 The general thrust of our recommendations that  
24 Steve gave was the fact that they ought to completely  
25 restructure the nuclear operations and bring everything

1 nuclear under one guy.

2 Beyond that, I don't believe we got into  
3 individuals or personalities.

4 BY MR. WILLIAMSON:

5 Q Would you characterize your presentation as  
6 being more positive or more negative?

7 A We tried to make it somewhat neutral. We  
8 tried to balance it with good things we've seen, bad things  
9 we've seen. We tried not to sound like the out-of-town  
10 experts that came in here and did a 10-day cook's tour and  
11 everything they looked at was bad.

12 Q Would you characterize it as being one of  
13 gloom and doom?

14 A No. It was not intended to be gloom and doom.  
15 I don't know how it was received.

16 I still haven't answered your question, though,  
17 as to what was my briefing.

18 This thing you have here called "TVA Study  
19 Findings" was probably a early precursor or draft of the docu-  
20 ment that I ultimately spoke from when we met with Parris.  
21 Probably, what the team and I put together in the post-  
22 Thanksgiving time frame.

23 The sense of what is in here is what we told  
24 them. It was packaged differently because when we-- As I  
25 recall, when we got together with White for the final

*Wm*



1 debriefings and the preparation of the go-back-and-talk-to-  
2 Parris, we took a look at what we had and reminded ourselves  
3 what was it we were brought down here for. It was to look at  
4 these four or five or six areas.

5 Q Okay.

6 A So, what we did instead of just reading our  
7 findings like this, we packaged them by heading. We had a  
8 section on records management, a section on equipment  
9 qualifications, a section on engineering assurance, configura-  
10 tion management section, a Watts Bar welding section. And  
11 there was one other thing. I can't remember what it was. I  
12 thin' there was-- I think there were six subjects.

13 Hugh Parris asked us to look into four of them  
14 from that first meeting with Matson I talked about. And  
15 either Chuck Mason or Bill Cottle added the other two.

16 Q Did the board have any questions for you  
17 during this presentation?

18 A Yes, there was a two-way-- I did the presen-  
19 tation, and Steve did the recommendations. And then there  
20 were questions and answers. There was a two-way dialogue  
21 during that period of time.

22 Q And you said that the-- as you recall, the  
23 recommendations were that they have a consolidated Office  
24 of Nuclear Power under one person?

25 A Under one person, yes. That was the central

1 theme of the recommendations. There was more than that one  
2 recommendation, though.

3 Q Do you recall any other recommendations?

4 A Not specifically. He had a one-page handout,  
5 like so (indicating). Not handout. He was reading from it.

6 BY MR. MURPHY:

7 Q How did you find TVA in general? Worse than  
8 you had anticipated, or as you had anticipated?

9 A Worse, really. Worse. It was a very bureau-  
10 cratic, very laid back-- I saw one of the observations here,  
11 "No sense of urgency." The impression we got that everybody's  
12 purpose in life was to earn a salary and that's it.

13 You did find that the lower levels of the  
14 organization when you get out into the-- to the sites and  
15 started talking to the first- and second-line supervisors and  
16 management, you did find some young people who (a) knew what  
17 had to be done and (b) were interested in doing it, but were  
18 very unsuccessful in dealing with the bureaucracy. It was  
19 kind of discouraging.

20 Q I mean, do you think that it was a-- I mean,  
21 did it appear like a complete breakdown in management struc-  
22 ture?

23 A We had this discussion before. What is "a  
24 complete breakdown"?

25 Q Well, how severe were the management problems?

1 I know you've had a lot of experience in the industry and  
2 you've been to a lot of plants. Were the problems at TVA  
3 worse than you've seen at other plants?

4 A Up until that time, yes. You basically have a  
5 management cadre that was not as equipped as they should have  
6 been for the tasks and challenges and responsibilities they  
7 had. They were inhibited by their salary structure. They  
8 couldn't hire anybody better because they couldn't pay them  
9 better, and they got what they paid for.

10 Q In your view, were they in a condition that  
11 they weren't likely to get their plants on line in the  
12 immediate future? Did they have problems that were long--  
13 long-term and type of problems that weren't going to be  
14 resolved in a quick fashion?

15 A Yes, sir.

16 Q Did you feel that there was-- that the bases  
17 for shutting down the plants were legitimate or that the  
18 problems were severe enough to cause the plants to be shut  
19 down?

20 A You really didn't have enough-- You mean from  
21 a technical standpoint?

22 Q [Shaking head.]

23 A We really didn't have enough to answer that  
24 question based on this survey.

25 Instead, what you concluded was because of

1 their people, their organization, their very structure, they  
2 couldn't even-- they couldn't answer the simplest question  
3 about a challenge of the plant. Their paper wasn't consistent  
4 with the then-existing standards for paper. Because of the  
5 fragmentation of the organization, they didn't always know  
6 where to go to get the answer.

7 So that you as an outsider or an intervenor  
8 or an allegator could ask a very simple question about the  
9 plant, and the organization could not respond, had no idea  
10 whether the finding or the question or the challenge was real  
11 or not. But the organization could not respond.

12 Q Okay. Did this result in you-- Was there a  
13 recommendation made that yourself and another-- and a group  
14 of SWEC employees do a further study?

15 A No.

16 Q How did that come about?

17 A No-- Well, a couple of things-- Say, a  
18 further study. There was two or three things that happened  
19 almost in parallel. When we visited Watts Bar, the then  
20 existing plant manager, who was....

21 Q Bill Cottle? Enis?

22 A Enis.

23 Q Eddie Enis.

24 A Eddie Enis, yeah. Eddie Enis asked Jack  
25 Williams for a couple of-- Let's see. I can't remember

1 exactly. Eddie Enis had asked Jack Williams for help in one  
2 area. And following the visit-- I think it was after the  
3 22nd, as a matter of fact. --when I was in communication  
4 with Bill Cottle, he asked me for assistance in another area.  
5 I can't remember what the two areas were.

6 We eventually both went back and provided--  
7 at least, we satisfied those requests. But I can't remember  
8 what the topics were.

9 Q Let me-- Maybe I can refresh your memory.  
10 I have a letter here to Mr. Cottle, W.T. Cottle, Site Director  
11 TVA, from you. I believe the date is January 3rd. Maybe  
12 that will help you refresh your memory as to the areas of  
13 concern that you discussed with Mr. Cottle--

14 A Yeah.

15 Q --and what Stone & Webster was-- what assis-  
16 tance they were going to provide to TVA.

17 A Yeah.

18 Q This was after they had been-- Stone &  
19 Webster had been contracted; was it not?

20 A No, no. These two things that-- Enis asked  
21 for something, and this was what Cottle asked me. I went  
22 down to someplace between-- between Christmas and New Year.  
23 I met Cottle at Watts Bar, and we talked about this. And I  
24 agreed to send him this assistance.

25 I got back to Boston, and then we had the New

1 Year holiday. And New Year's Day, Bill Matson called me  
2 and told me that White was meeting with the TVA board to  
3 become the head of nuclear power and that I should be pre-  
4 pared to fly to Chattanooga-- no, I should be prepared to  
5 meet with White in Washington the following week.

6 So, this meeting and the other thing that we  
7 set up for Eddie Enis, and I can't remember what it was,  
8 transpired between the end of the survey and before I got  
9 that notification.

10 This became a problem as the events unfolded  
11 because I had agreed to do this with the contractor, and all  
12 of a sudden, I was being brought down there as a loaned  
13 employee. So, this effort in itself, you never really get  
14 off the ground.

15 I can't remember what Enis asked us to do,  
16 though.

17 Q Did you have-- Once you became-- Once you  
18 became a loan manager for TVA, what was one of your first  
19 assignments?

20 A I was never a loan manager. I was in the bull  
21 pen.

22 Q Okay.

23 A My first assignments involved, you know,  
24 setting up the office. We used the office <sup>for</sup> administration,  
25 logistics for the office, and providing resources on call to



1 White or the other managers when we were asked. I was  
2 basically a labor broker.

3 Q So, were you one of Mr. White's advisors, then?  
4 When you say "in the bull pen", is that what you mean?

5 A Yes.

6 BY MR. MURPHY:

7 Q How did-- This is what we talked about before,  
8 the Nace/Kirkebo Study.

9 A Yes.

10 Q How was that organized and created?

11 A In the capacity of being a labor broker, Wegner  
12 comes to me one night and says, "Look, we've got to start  
13 putting together a team to develop a corrective action plan,  
14 corrective action program. Put together a team of people who  
15 can review all the correspondence that was-- all the negative  
16 things that were ever written about TVA from"-- It was a  
17 cutoff date in the past. Pick that date, whatever that was.  
18 "Go through all the correspondence, all the reports, findings  
19 from whatever sources exist, catalog all the negative informa-  
20 tion about TVA." Okay?

21 So, I put together that team. I got John  
22 Kirkebo, and Kirkebo recruited from the various SWEC offices  
23 the rest of the people. We set them up in the far end of the  
24 fourth or sixth floor, whatever it was down there, and got  
25 them the computer access, got them the files out of their

1 records program and literally just, from that date certain  
2 in the past-- And I think it was probably January '84 on.  
3 --read everything, and everything that was in a piece of  
4 correspondence that was derogatory or implied criticism of  
5 TVA nuclear, put it into the machine. Assigned some arbitrary  
6 categories and causes to everything so we can get it all up  
7 in a data base and try to do some studying. Lump things  
8 together to use that as a bases of starting to formulate a  
9 corrective action plan.

10 We did that and extracted the information,  
11 paying no attention to whether it had been reported corrected  
12 or whether it had been substantiated. If there was indica-  
13 tion of criticism, it went in the machine. That's all that  
14 effort was.

15 BY MR. MURPHY:

16 Q Let me ask you this: Did Mr. Kirkebo and the  
17 staff that he assembled, were they well-qualified people?

18 A To do this, yes.

19 Q You had performed that type of-- Had that  
20 been performed at other utilities in the past, do you know?

21 A Not of this magnitude. At least, to my  
22 knowledge.

23 Q Okay. In what respect? I mean, just in volume  
24 alone or--

25 A Volume alone and the breadth of it. It's kind

*Clear*



1 of a routine type of thing you do if you talk about a specific  
2 problem. Now, if you walked in here today and I happened to  
3 have an operating plant and you walked in here today and  
4 said, "Hey, I'm not very happy about the number of findings  
5 I keep seeing in the instrument and controls areas," you  
6 know, the normal reaction, I'd say, "Hey, let's step back  
7 and take a look at what's happened historically in the  
8 instrument and controls area."

9 Q Uh-huh.

10 A So, from that standpoint, it's a rather routine  
11 technique. But to my knowledge, it had never been done in  
12 just a broad, global, everything-that's-critical approach  
13 before.

14 Q Okay. Do you know what the results of that  
15 study were used for?

16 A It was used initially to-- Well, there was a  
17 March-- early March meeting with the NRC.

18 Q March 11th?

19 A March 11th.

20 Q Okay.

21 A After-- What we did was after we had all this  
22 input in the machine and sorted, you know, we took a couple of  
23 trial sorts by categories and by causes. Then we picked the--  
24 we picked the combination of categories and causes and used  
25 that as an outline for the-- starting the presentation that

1 took place on March the 11th.

2 The final product that was presented on March  
3 the 11th is somewhat different from that, but this is really  
4 what happened to start from.

5 I left about that time. It was intended to go  
6 the next step from that March 11th meeting and put together a  
7 formal submittal to the Staff from the standpoint of what the  
8 total recovery plan was. And I don't know what happened in  
9 that.

10 The putting it together on-- it says February  
11 14th here. That was kind of-- At that point, it was all in  
12 the machine and everybody agreed on what the categories were.  
13 We sent most of the people home that had done the reading and  
14 the keyboard entry.

15 Q Are the findings of your report, the various  
16 categories in your opinion, you've identified a top ten and  
17 then went beyond, of course. There's a pretty good list  
18 there.

19 A Yeah.

20 Q Are they valid? And let me say, by "valid",  
21 I mean not in the sense that it's a sure thing but it's  
22 something that has to be looked at to determine whether it is  
23 a real problem or not.

24 A In every case, they had to be looked at.

25 Q Okay.

1 A In every case.

2 Q In your view, is that a good method of at least  
3 establishing a list of possible problems at a plant?

4 A Oh, yeah. Oh, yeah.

5 Q Okay.

6 A That's a starting point. It is not going to  
7 be the hundred-percent bottom line. It's a starting point to  
8 focusing in your management attention.

9 Go back to my example again, if you come in  
10 here and say, "Hey, we're not happy with you because every  
11 time we turn around you have a problem with the instrument  
12 and controls area," I say, "Gee, thank you. Let me go look at  
13 it."

14 The next thing I need to do is say, "Hey, let  
15 me see what he's been seeing." It gives me a starting point.  
16 That's all.

17 BY MR. WILLIAMSON:

18 Q Did this review-- Was the intent of it to  
19 review any root causes of problems identified at TVA?

20 A What do you mean by "root causes"?

21 Q Well, the basic effect of why we are where  
22 we are today when you were looking at these things. Why we  
23 had--

24 A Well, let me kind of waffle on that and say  
25 yes and no. Because when you're trying to put together a

1 plan of corrective action, you know, you've got to know what  
2 caused the problems in the first place.

3 Q Was your--

4 A Yes. If you asked me, "What is the root  
5 cause?", no.

6 Q Was it extensive enough to identify root  
7 causes for the areas that you've documented?

8 A About 90, 95 percent.

9 BY MR. REINHART:

10 Q Were there any surprises from the systematic  
11 analysis over what you did in the management assessments?  
12 Were they close? Were they radically different?

13 A More like confirmatory.

14 Q Confirmatory, okay.

15 BY MR. MURPHY:

16 Q Would you consider this an in-depth study?

17 A No.

18 Q From a document viewpoint, at least.

19 A From a document search, yes.

20 Q Okay.

21 A Yes.

22 Q If you did your initial assessment, the team  
23 assessments that you're involved in in the November time  
24 frame,--

25 A Uh-huh.

1 Q --which is going out and physically doing  
2 some interviews and talking to people and doing things,--

3 A Yes, sir.

4 Q --then you do a document search of this nature.  
5 And when you combine them two, you come up with a fairly close  
6 list of problems. I mean, fairly--

7 A Yeah.

8 Q Would that lead one to believe that some of  
9 them problems are probably valid?

10 A Well, because of the magnitude, you'd have  
11 to conclude that some of there were valid. Now, whether 10  
12 percent are valid or 90 percent are valid, you really wouldn't  
13 know at that point in time.

14 Q Uh-huh.

15 A Because, remember, the other thing that we  
16 constantly faced, you couldn't get a-- didn't seem able to  
17 get a prompt, accurate answer from the organization with  
18 respect to the validity.

19 So, what you can say conclusively is, "Okay,  
20 there's a list of questions that have been asked." But it  
21 couldn't be conclusively used to say that these are all  
22 rock bottom, solid questions and problems.

23 Q But that would certainly identify areas that  
24 you have to look at.

25 A Yes, yes.

1 Q There's no question in your mind there.

2 A No question in my mind. And the areas here are  
3 all the-- you know, all the classics. Procedure inadequacy,  
4 failure to follow procedures, lack of direction, control.  
5 These are classic questions.

6 Q A good number of them appear to be in the  
7 Quality Assurance related area, and especially in the top ten.  
8 We start with management, I believe, as a number one priority.  
9 But a good many of them others are in the Quality Assurance  
10 area.

11 A Uh-huh.

12 Q Initial team assessments, did those-- I know  
13 you didn't look specifically at that area, but do you think--  
14 did you have a feel that that might come up?

15 A I guess I've answered that. I said I wasn't  
16 surprised.

17 Q Okay, fine.

18 A I hadn't thought about it that way in the  
19 past. I really wasn't surprised when this started coming out.

20 BY MR. WILLIAMSON:

21 Q Except for making the results of your  
22 systematic review, who was that given to?

23 A I believe Bill Wegner.

24 Q Did you personally-- Was Mr. White given this  
25 information?

1           A           I don't know for a fact. I suspect he was  
2 either briefed or given to him. But I don't know.

3 BY MR. MURPHY:

4           Q           Do you know if this was used to-- in prepara-  
5 tion nuclear performance plan, nuclear recovery plan, that  
6 White presented?

7           A           It was used-- It was a starting point for  
8 drafting that.

9           Q           Okay.

10          A           Now, again, it wasn't finished when I left,  
11 but the plan had gone beyond-- I would guess, if you showed  
12 me what was finally issued, it would have departed from some  
13 of this.

14          Q           Okay.

15          A           Because there were some areas that, for one  
16 reason or another, that was either extended or retracted after  
17 we took a look at the raw data-- some of the raw data.

18          Q           During this same time frame, end of January,  
19 first of February, there was an effort conducted by Craig  
20 Lundeen (phonetically).

21          A           Yeah.

22          Q           Do you recall that effort that he and, I think,  
23 five or six other SWEC employees were involved in?

24          A           They went to Sequoia? Was it Sequoia?

25          Q           Watts Bar.

1 A Watts Bar.

2 Q Yeah.

3 A Yeah. He went to Watts Bar-- I just remembered  
4 what Enis's request was from Watts Bar. Enis asked me for  
5 some help in writing what was going to be the Watts Bar  
6 improvement plan. Okay? I sent Larry White back down to  
7 help him do that. That became overtaken by ~~since~~<sup>events</sup> then when  
8 White came in and wanted to do a whole plan.

9 Craig went to Watts Bar either looking at the  
10 one problem or at some specific allegations about welding.

11 Was there a--

12 Q Do you know if it had anything to do with  
13 NSR's perception?

14 A Yeah.

15 Q Okay. Do you know what the results of the  
16 study were? Or, let's-- Were you involved in that?

17 A Vaguely. Vaguely, because-- Let's see.  
18 Around about that time, Dick Kelly was put in as director  
19 of QA. And at that point in time, then, Lundeen reported  
20 back to him.

21 But NSR perceptions dealt with the NSR  
22 organization's thoughts on a couple of issues related to  
23 welding. I can't remember what it was. Can you refresh my  
24 memory?

25 Q They gave a briefing to Commissioner



1 Commissioner Applestein on December 19th based on that brief-  
2 ing, NRC on January 3 sent a letter to TVA asking them to  
3 state whether they were in compliance with Appendix B at  
4 Watts Bar and to address the eleven issues that were brought  
5 up by the NSR as representative.

6 A That was a precursor of the Appendix B letter,  
7 then.

8 Q Yes, sir.

9 A Okay. [Pause.]

10 Are you sure of that?

11 Q Yes.

12 A That's what he went up there for then.

13 Q You don't know what the results of the-- Did  
14 you have any--

15 A I really don't remember it that way.

16 Q Okay. How do you recall it?


17 A Well, let me think for a minute.

18 The NSR-- Well, maybe it's-- ~~NSR's~~ <sup>NSRS</sup> perceptions  
19 were a separate layer, and I guess it was from the NSRS  
20 itself. The Appendix B letter was a separate document,  
21 right?

22 Q Right.

23 BY MR. WILLIAMSON:

24 Q I think at that time, they were handled  
25 separately, but I can't be real sure of that. You had the



1 NSRS perceptions, it would be a help.

2 MR. REINHART: What are you looking for?

3 MR. WILLIAMSON: The perceptions.

4 MR. REINHART: Oh.

5 MR. WILLIAMSON: Here they are.

6 THE INTERVIEWEE: Yeah.

7 BY MR. WILLIAMSON:

8 Q Was there a letter that went with that?

9 MR. REINHART: Go back a few pages.

10 Q (Continuing) From the NSRS?

11 A No, they gave it to Commissioner Applestein.

12 Q And then the Commissioner sent that letter with  
13 those attachments to TVA. If you turn back a few pages--

14 MR. REINHART: It's the other way.

15 A My problem is I don't remember Lundeen being  
16 associated with the preliminary work in the ~~finished tube~~ <sup>Appendix B</sup>  
17 area.

18 MR. REINHART: Okay.

19 A (Continuing) I know he went up there,  
20 something about welding.

21 BY MR. WILLIAMSON:

22 Q Do you know the results of his efforts?

23 A [Shaking head.] Not the final results. I  
24 think-- As I said, sometime around that time, Kelly arrived  
25 on the scene, and it was turned over to Kelly.

1 Q Let me move on to another issue.

2 A This does not-- Given the fact it was a long  
3 time ago, this does not look like the piece of paper I  
4 remember. That's all I can say. Whatever happened, I don't  
5 know.

6 Q I guess another issue that we would like to  
7 discuss with you, if we could, is the March 20th, 1986  
8 response from Mr. White to the NRC, which we have a copy of.

9 I'd like to know what input you had into that  
10 letter.

11 A You realize I wasn't there on March 20th.

12 Q Yes.

13 BY MR. REINHART:

14 Q When did you leave?

15 A I arrived out here on March 15th. As soon as  
16 that March 10th meeting was over, I left Chattanooga about a  
17 day later. I can't remember if that March-- I think that  
18 March 10th meeting was on a Friday.

19 BY MR. WILLIAMSON:

20 Q Did you have any input into the final March  
21 20th letter?

22 A No.

23 Q None?

24 A None at all. I had seen early-on drafts.

25 Q Did you have any comments verbally or written

1 comments into the draft or that response?

2 A Early on, I had some comments. There was a  
3 letter that came around with a comments line on it, and I  
4 sent it back.

5 Q Do you recall-- I mean, were there editorial  
6 comments, or were there substantive changes that you thought  
7 you needed to address? Or what were the nature of the comments  
8 that you made?

9 A I don't remember the nature. As we talked the  
10 last time, the big discussion at the time was whether-- it was  
11 over the word "pervasive". I was a proponent that there had  
12 not been a pervasive, complete, across-the-board breakdown.  
13 But I was not in the minority either.

14 Q And your definition of "pervasive" would be  
15 what?

16 A Absolute, complete failure. Across the board.

17 BY MR. MURPHY:

18 Q Is that a hundred percent in all the 18  
19 criteria?

20 A That's the way this would be interpreted, yes.

21 Q Okay. That's where that's being interpreted.  
22 That's your interpretation of "pervasive"?

23 A Yes.

24 BY MR. WILLIAMSON:

25 Q Has that ever happened in the nuclear industry?

1 A Not to my knowledge.

2 Q I would assume it's theoretically possible,  
3 but is it realistically possible?

4 A No.

5 Q I mean, it just couldn't happen.

6 A It couldn't-- Well, anything can theoretically  
7 happen.

8 Q Yeah.

9 A But the likelihood of a complete, across-the-  
10 board, everything breaking is very small.

11 Q Did you concur with the term-- using the  
12 term "pervasive breakdown"?

13 A We didn't have any choice on that, did we?  
14 That was in the Appendix B letter.

15 MR. MURPHY: No, it wasn't.

16 BY MR. MURPHY:

17 Q You mean from the NRC?

18 A Yeah.

19 Q No.

20 A You showed me this the last time.

21 Q Yeah.

22 A I couldn't believe it then either. Okay.

23 The NRC said: Are you meeting the requirements of Appendix  
24 B?

25 I don't think that's in there. I don't know

1 where the hell that came up.

2 BY MR. MURPHY:

3 Q Would you use that word in response to the  
4 letter to the NRC yourself?

5 A [Shaking head.] No.

6 Q Why wouldn't you use that? I'm curious.

7 A Having seen the grief that it caused in this  
8 case, I wouldn't ever touch it.


9 BY MR. WILLIAMSON:

10 Q Let me ask you--

11 A What I really have difficulty is trying to  
12 figure out how-- how that word did get-- did come in there.

13 Q Also, in the March 20th response, the letter  
14 replies that the overall QA program is in compliance with  
15 Appendix B. Having done a management assessment in the fall  
16 of '85, having done the systematic review, and having access  
17 to a lot of documentation and a lot of discussion, also  
18 understanding that you didn't look at hardware per se, at  
19 that time when you left, March 10th, 1986, did you say that  
20 they were in overall compliance with Appendix B?

21 A Appendix B requires you to have a program  
22 which addresses a list of things. They had a program that  
23 addressed a list of things. They had implementation problems  
24 here and there. But the question is: Did they have a  
25 satisfactory Appendix B program with the emphasis being on



1 what Appendix B required them to have? They had to have.

2 Q The written program.

3 A A written program. They had more procedures  
4 than they needed.

5 Q Is not part of that program implementation?

6 A Of course, it is. But the problem I'm having  
7 with that word and the word-- the origin of the word  
8 "pervasive", the dialogs we were having which probably, in  
9 part, stemmed from verbal dialog with the staff and maybe  
10 at the ~~JME~~ <sup>IIE</sup> level. I just never had any myself. But the  
11 emphasis kept coming back at the program, not the implementa-  
12 tion. There was no question that they had implementation  
13 problems.

14 However, given that their implementation  
15 problems-- that does not mean that the whole thing is  
16 busted.

17 BY MR. REINHART:

18 Q If the question had asked, "Are you meeting  
19 the requirements of Appendix B from an implementation aspect"  
20 and just focusing on that, what would have been a good answer?

21 A Let me rephrase the question.

22 Q Okay.

23 A If the question had been, "Are you in  
24 compliance with TVA's QA program and if not, identify the  
25 areas where you are not in compliance," now you have a

1 meaningful, possible answer to that.

2 But by keeping it pegged back to 10 CFR 50,  
3 Appendix B, which does nothing more than say you've got to  
4 have a program that does the following 18 things, there's a  
5 hell of a lot of confusion entered into the question, which  
6 was really a critical question.

7 Q What areas-- What would the answer have been  
8 if that had been the question?

9 A There's design control problems. There's  
10 welding control problems. There's design interface problems.  
11 They had the criterion 17 problems with the records control.

12 Q How was the corrective action program?

13 A Pardon?

14 Q How was their implementation of the corrective  
15 action program?

16 A You mean criterion 16?

17 Q 15 and 16 both.

18 A Well, 15, I treat from-- Given TVA's  
19 situation, 15 I look at from the standpoint of the handling  
20 of nonconformances on a given site. That was reasonably  
21 okay.

22 Criterion 16, the translation of problems  
23 between sites was not working very well because of the  
24 organizational fragmentation.

25 Q What about identification of root causes,



1 action to prevent recurrent? Those particular aspects.

2 A Relative to 15 or 16?

3 Q 16.

4 A Well, that was weakness because, since--  
5 given that a problem happened on Watts Bar and given a weak  
6 system of communicating that problem to Sequoia, Brown's  
7 Ferry, Belfont, then that inhibits your total corrective  
8 and preventive action. That was a weakness.

9 Where they used their program was probably  
10 adequate. They didn't use it enough.

11 Q Okay. Now, was he identifying things he  
12 should have identified or what?


13 A Yes. And wasn't very timely, as I recall,  
14 either.

15 Q Okay.

16 BY MR. WILLIAMSON:

17 Q Was any of this information used in your  
18 systematic analysis used to-- to support that March 20th  
19 response to NRC?

20 A I don't think so. The reason I say I don't  
21 think so is because, by that time, there had really not been  
22 substantial effort put into investigating the validity of  
23 the criticisms yet. At that point in time, it was still a  
24 punch list. Here's everything bad anybody's ever said.  
25 Testing the water. Any validity to it had really not been



1 done.

2 At that point in time, also, the Appendix  
3 B letter and the corrective action plan, the MPB was being  
4 worked and paralleled with different groups also. So, there  
5 wasn't that much cross-pollination between the groups.

6 Q Would a management that had gone through the  
7 type of analysis that you did and identified those areas of  
8 potential problems, would they have to then go through and  
9 verify that they did or didn't before they could say they had  
10 no problems?

11 A Say that just--

12 Q I guess what I'm wanting is: Take a responsible  
13 management that had identified through this 800 document  
14 analysis that you performed this list of potential problems,  
15 doesn't that sort of put some kind of an obligation on them  
16 now to go through and verify whether they were, in fact,  
17 valid or not?

18 A I think you miss the point. Each one of those,  
19 however many there were, 800 documents, was a vehicle of its  
20 own that required an investigation and response.

21 In other words, a Region II <sup>ICE</sup>~~INE~~ report is one  
22 of those documents. So, if that report and all the criticism  
23 that you pull out of there had to be responded to separately.  
24 Okay? So--

25 I forget what the question was again.

*Lee*

1                    You had to do that anyway, but not as a result  
2 of just having pooled them all together so you can quickly  
3 look at it and see what your envelope of potential exposure  
4 is. I mean, you could take that infamous report and throw  
5 it away, and you hadn't lost anything.

6            Q            Okay.

7            A            So, you see what I mean? It was a tool to  
8 try and look at it all in the aggregate. That's all.

9            Q            I guess where I'm getting confused is: We  
10 look at it in the aggregate, and now we have a list of prob-  
11 lems that look pretty good. These are areas we've got to work  
12 on.

13                    Now, one school says: Okay, let's get to work  
14 and look at these areas, like in developing a nuclear per-  
15 formance plan.

16            A            Yes.

17            Q            Another school of thought says: Well, we  
18 don't know really that these were all based on valid issues  
19 or not, so we don't have to worry about it.

20                    Is that--

21            A            No. No.

22                    Individually, the beans had to be put<sup>6</sup> bed  
23 because they came to you in inspection reports, whether it  
24 was from ANI or from ~~the~~<sup>the</sup> or from a Congressman. Each one  
25 by itself had to be put to bed. The intent of doing this

1 analyses was to give us that bigger picture perspective which  
2 could leap into the nuclear performance plan.

3 So, through the nuclear performance plan,  
4 you were taking some higher order of corrective and preventive  
5 actions that enveloped all possible things that may have been  
6 wrong as represented by the individual beans.

7 Q Okay. Trend analysis type work.

8 A Trend analysis.

9 Q Okay.

10 A Trend analysis, except there is really no  
11 analyses of the time/history pattern of it.

12 Q Okay.

13 A Make sense?

14 Q Uh-huh.

15 BY MR. WILLIAMSON:

16 Q Mr. Nace, I have one question. The discussion  
17 you had with Mr. Cottle--

18 A Uh-huh.

19 Q --and the subsequent agreements that were  
20 made, was there ever anything initiated by Stone & Webster  
21 or by your-- or by TVA to establish a program wherein you  
22 would help assist TVA in establishing a sufficiently high  
23 ~~countenance~~ <sup>Confidence</sup> within Quality Assurance and associated design  
24 control measures at Watts Bar?

25 A The effort got started, and it got very quickly

1 terminated.

2 Q By whom for what reasons?

3 A By whom? I believe-- I believe it was Wegner  
4 that asked me to terminate that and very much because of the--  
5 Let me make sure you understand. Let me clarify here.

6 The putting together of that agreement and  
7 sending people up there under that agreement was viewed ~~on~~  
8 as a potential conflict of interest, and that work under that  
9 contract was curtailed. And I believe some people did, in  
10 fact, mobilize.

11 I believe also, later on, an effort-- a  
12 similar effort was started under a different contract, but  
13 I believe that was about the time I was leaving, as I recall.  
14 So, that would be a hard one to answer as a yes or no.


15 Yes, there was work done; no, it didn't happen  
16 exactly as it was conceived in late December when Cottle and  
17 I talked. And I don't know what the outcome of it was.

18 MR. WILLIAMSON: Any other questions, Mark?  
19 Len?

20 MR. MURPHY: I have one little final thing  
21 here.

22 Mr. Nace, have I or any other NRC representa-  
23 tive here threatened you in any manner or offered you any  
24 reward in return for this statement?

25 INTERVIEWEE: None whatsoever.



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MR. MURPHY: Have you given this statement  
freely and voluntarily?

INTERVIEWEE: Yes.

MR. MURPHY: Is there any additional informa-  
tion you'd like to add to the record?

INTERVIEWEE: No.

MR. MURPHY: This interview is concluded at  
2:50 p.m., April 22nd, 1987.

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*[Handwritten Signature]*  
9-17-87

*[Handwritten Initials]*