

ORIGINAL

UNITED STATES
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:

DOCKET NO:

INVESTIGATIVE INTERVIEW

10 CFR 50, Appendix B

Interview of John A. Kirkebo

LOCATION: Lookout Place
Chattanooga, Tennessee

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EXHIBIT 28

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NATIONWIDE COVERAGE

1 MR. MURPHY: Do you have any problem
2 with this being transcribed?

3 THE WITNESS: No.

4 MR. MURPHY: And we're going to ask
5 you to do this under oath. Do you have any problem
6 with that?

7 THE WITNESS: No.

8 MR. MURPHY: Okay. For the record,
9 it is now 10:30, February 26, 1987. This is an interview
10 of John A. Kirkebo, who is employed as a TVA contract
11 employee from Stone & Webster Engineering Company, is
12 that correct?

13 THE WITNESS: Corporation.

14 MR. MURPHY: Corporation. Location
15 of the interview is Chattanooga, Tennessee. Present
16 at this interview are Len Williamson, Larry Robinson,
17 Leo Norton, John Craig and Dan Murphy. As agreed, this
18 is being transcribed by a Court Reporter. The subject
19 matter of this interview concerns TVA's March 20th,
20 1986 response to the NRC regarding their complaints
21 with 10 CFR 50, Appendix B.

22 Mr. Kirkebo, will you please stand and
23 raise your right hand?

24 Do you swear or affirm the information
25 you are about to give is the truth, the whole truth and

1 nothing but the truth, so help you God?

2 EXAMINATION

3 BY MR. MURPHY:

4 Q Mr. Kirkebo, will you relate to us your
5 background? That is, your educational background and
6 employment experience?

7 A Surely. I graduated from the University
8 of Washington in 1964, with a Bachelor of Science Degree
9 in Civil Engineering.

10 Upon graduation I was commissioned as
11 an Ensign in the United States Navy and immediately
12 started the Navy nuclear power program.

13 I attended school for approximately
14 two years, and then upon completion of the training
15 portion of the Navy nuclear program, I joined the fleet,
16 so-to-speak, and stayed in the United States Navy on
17 submarines for four additional years.

18 I got out of the Navy in 1970. I joined,
19 shortly thereafter, Stone & Webster in Boston. My work
20 experience at Stone & Webster was primarily work on
21 Stone & Webster nuclear projects.

22 The first project I was assigned was
23 the North Anna Three and Four Projects for Virginia
24 Electric Power Company. That was followed by another
25 project for New England Electric. That was followed

1 by a third project for Virginia Electric Power, North
2 Anna Units One and Two. All of these were nuclear projects,
3 pressurized water plants in the design and construction
4 stages.

5 In 1976 I left the Stone & Webster Boston
6 Office. I was assigned to the Cherry Hill, New Jersey
7 Office, and was assigned as an Assistant Project Engineer
8 for the Riverbend Station, which was a boiling water
9 plant for Gulf States Utilities that Stone & Webster
10 had responsibility for the engineering, design and
11 construction. I joined the project as an Assistant
12 Project Engineer.

13 The project was in a deferred position.
14 We had a construction permit. We had done site development,
15 but we hadn't really started active construction.

16 In 1978, I was promoted to become the
17 Project Engineer responsible for the execution of all
18 engineering work on this project for Stone & Webster,
19 and in 1979, we mobilized construction and construction
20 started in the fall of 1979, and I was the Project Engineer
21 and sometime in the early '80's I was promoted to Senior
22 Project Engineer, again responsible for all the engineering
23 work on that project.

24 As you may know, we completed the Riverbend
25 project in 1985, relatively short construction duration

1 compared to the industry standards. Quite successful
2 project, and I'm quite pleased to have been involved
3 with it. The job was completed, as I said, we loaded
4 fuel in the fall of 1985.

5 During the latter stages of that project
6 I was assigned as the Senior Project Engineer. My office
7 was at the construction site, so I worked not only in
8 the headquarters office, but at the construction site
9 during the final stages of construction and startup.

10 Following that completion of that project,
11 I went back to Stone & Webster's office for a short
12 period of time, and then in January of 1986 was assigned
13 to TVA.

14 In February of '86, I was made a loan
15 manager, if you will, if you're familiar with the concept.
16 I was the manager of Engineering and Technical Services,
17 a position in Knoxville. That was effective, I believe,
18 February 18th of last year.

19 I had that position till October, September,
20 I guess, September when I was again, as a loan manager,
21 made the Director of Engineering in TVA. I was in that
22 position for approximately a month as the Director of
23 Engineering.

24 When the conflict of interest issue,
25 when Mr. White took a leave, I changed my status, still

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1 as a Stone & Webster employee, but now I was an advisor
2 to the acting Director of Nuclear Engineering, and that
3 was effective in October of '86.

4 I presently am still an advisor to the
5 Director of Nuclear Engineering in Knoxville. I have,
6 however, submitted my resignation to Stone & Webster
7 and accepted a position starting next week as the Director
8 of Engineering for TVA, and that, as I said, that position
9 will be effective next week.

10 So I'm looking forward to the challenge
11 of working for Mr. White and trying to make this program
a success.

13 Q Could you describe for us your role
14 in the, or participation in a couple of areas? First,
15 the technical reviews that were compiled as a result
16 of NSRS 11 perceptions and secondly, the March 20th,
17 1986 letter regarding TVA's position in compliance with
18 Appendix B. Would you please do that?

19 A Sure. First of all, I want to advise
20 you gentlemen that I haven't spent any time going back
21 through my files or through my records or through any
22 correspondence in preparation for this discussion. So
23 if I could have had my staff pull out everything we
24 did, but I didn't do anything. I wanted to try to bring,
25 I didn't want to try to bring a whole pile of materials

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1 and notes. I wanted to try to present my recollections
2 as best I can.

3 So specifically, as far as the technical
4 reviews I, my role was primarily to insure that there
5 was appropriate technical leadership involved in the
6 preparation and review of the attachments to this letter.
7 So I was primarily trying to make sure that the right
8 people were involved and that the right degree of
9 technical adequacy was demonstrated by the responses.

10 In other words, I wanted, I had assigned
11 people to be involved to review it and myself. I reviewed
12 the write-ups. The write-ups were prepared and reviewed
13 a number of times. We would gather some information.
14 We would review it and compare it with the record that
15 existed within the engineering organization, and as
16 a result there were some modifications, many modifications
17 to the attachments to this letter.

18 So my role was primarily in coordinating
19 and reviewing the materials that were attached to this
20 letter.

21 As far as my specific role in preparation
22 of the letter, I had none other than review and
23 concurrence. In other words, yes, I reviewed the letter;
24 yes, I agreed with the letter, but I didn't prepare
25 the letter.

1 Q Okay. Did you have a role in developing
2 what has been described to us as executive summaries
3 that were the attachments to the March 20th, 1986 letter?

4 A Yes. The attachments to the letter,
5 that was the role that I just described for you.

6 Q What you're suggesting, redevelop these
7 into rather concise, executive summary as opposed to
8 some of the initial responses from the technical staff?

9 A Well, I think, I don't recall how that
10 decision was made. I think it's a relatively logical
11 decision. I did review on most of the issues the, I
12 can't say I reviewed. I did insure that there was prepared
13 a document of much greater detail than that which is
14 summarized as an enclosure to this letter. So I didn't
15 review all those, but I wanted to insure that there
16 was backup materials to support the summary level
17 attachments that were supplied with the letter.

18 Q Let me try, with the backup materials
19 you're speaking, you're addressing, those binders that
20 were turned over to the NRC in the last couple of months?

21 A Yes.

22 Q Was it your suggestion that they develop
23 them?

24 A No. That was already underway at the
25 time that I joined TVA. Remember, I joined TVA is a

1 line manager, a loaned line manager in February, February
2 the 18th, and the process to develop this letter was
3 pretty well underway at that time.

4 MR. MURPHY: Okay.

5 BY MR. NORTON:

6 Q Mr. Kirkebo, I've got in front of me
7 a summary of an interview done with you on January 5th,
8 1987, by Mr. Mark Peranich, Dan Murphy, who is here,
9 and Mike Runyan, and I wanted to go over this, and of
10 course, you did not prepare this, but it's based upon
11 what you said and I wanted to confirm the accuracy of
12 it and also to ask the follow-up questions regarding
13 it.

14 According to this, your initial involvement
15 included a review of NSRS perception documentation and
16 TVA technical position, is that correct?

17 A I think, yes, it's correct. As I just
18 defined it.

19 Q Yeah. Uh-huh. You performed these
20 reviews with licensing personnel within the TVA engineering
21 organization?

22 A Yes.

23 Q Who were those personnel?

24 A At the time there was two primarily
25 licensing contacts. One was Don Williams. Another

1 one was John Cox.

2 Q Was there anybody else assisting you
3 with your review?

4 A These people were coordinating the
5 preparation and review of it for me, and as far as,
6 and then we would have occasion to bring in the responsible
7 technical party. In other words, we would have a
8 licensing person. We would have the technical party
9 and myself would all sit in my office and we would all
10 go over the materials and talk about exactly what's
11 the basis for this statement and what do we have, so
12 it was really a three-party process where you had licensing
13 people coordinating and these were, at the time this
14 was a licensing organization within engineering.

15 Not Mr. Gridley's licensing organization
16 as we know it now. So we had a licensing organization.
17 We had the responsible technical party, which usually
18 would come from one of our technical branches, which
19 the branch chief reported to me.

20 Q And the technical party was the person
21 that was doing the actual writing of the position or
22 response?

23 A The technical person and the licensing,
24 we would all sit and review it, and then it was entered
25 of process between the technical people and licensing.

1 people to prepare the summaries. These things were
2 not created in an afternoon. It's some kind of process.

3 Q According, quoting again from this
4 write-up of the January 5th interview, his reviews,
5 meaning yours, found that the technical line organization
6 personnel responding to the NSRS perceptions did not
7 have a cogent concept for 10 CFR 50, Appendix B. Is
8 that accurate?

9 A I don't remember making that statement.
10 I think, no, I don't remember making that statement,
11 nor would I make that statement today.

12 I think the statement is much too direct
13 and much too simple to reflect a very complex process.
14 Namely what is an adequate program to comply with Appendix B?
15 What are the necessary elements of that program, so
16 I certainly wouldn't try to summarize it, nor do I recall
17 summarizing to a succinct and specific degree.

18 Possible somebody that was listening
19 to me may want to draw that conclusion, but I certainly
20 wouldn't make that statement myself.

21 Q In your perception, were there problems
22 on the part of the technical personnel in appreciating
23 the requirements of Appendix B?

24 A Well, I think Appendix B is such an
25 upper tier document, one compared to the implementation

1 to a quality program that there are very, very few
2 individuals that can make the direct correlation from
3 Appendix B to the controls and the business practices
4 that are employed to meet the requirements of Appendix B.
5 In other words, the Appendix B requirements are an upper
6 tiered requirement that's reflected down through topical
7 reports, through the Quality Assurance program, through
8 procedures and other controls, and it's certainly not
9 unusual that engineering and technical personnel who
10 have an excellent grasp at program requirements and
11 on the controls that exist cannot elucidate them in
12 the form of, "Gee whiz, does it or does it not comply
13 with Appendix B?"

14 In other words, it's a tiered process
15 and they understand the tier in which they operate.

16 Q Let me clarify something for myself
17 right now, then. This review process of the technical
18 position papers or the responses which later became
19 attachments to the March 20th letter, were they meant
20 to address the issue of whether or not a particular
21 aspect of TVA's program was in compliance with Appendix B?

22 In other words, was the technical reviewer
23 being asked to make a judgment as to whether or not
24 his area was in the parameters of Appendix B?

25 A I think what the intent of the letter and

3/A

1 the intent of the effort was to pull together the facts,
2 assemble the facts. Assemble what had taken place,
3 what controls were in effect? What a, what elements of
4 controls were present? What the process leading to
5 suitability for compliance with our commitments, and
6 that was the general intent. I don't think, I think
7 it's very difficult to approach it in any other fashion.

8 BY MR. CRAIG:

9 Q Who would do the review of the situation,
10 the facts as compared to the commitments to make the
11 call, yes, we did; no, we didn't?

12 A Again, the process is again a tiered
13 process. We have our commitments. Our commitments
14 are reflected in elements of our programs. Our programs
15 are implemented and controls are put in place such that
16 a commitment is recognized as a requirement within a
17 program, and a program is executed and as a result of
18 the execution of the program you now find, you now
19 demonstrate and can defend compliance with the program.

20 So you have a program definition and
21 you have program implementation.

22 The elements that the engineering people
23 were responsible, and I was responsible for, was the
24 definition of the elements of the program and also
25 a definition of were the programs adequately implemented?

1 In other words, there was, the NSRS
2 perception, as I remember, I don't remember exactly
3 how many there were, I think it was 11, we take those,
4 let's collect the relevant facts. Let's see whether
5 we had a program. Let's see if we had elements in effect
6 in a program. Let's see if the program made sense.
7 Let's see if the necessary controls are in place.

8 So you took a certain element, a certain
9 perception, if you will, a certain perceived weakness
10 and you said all right, let's see if we can collect
11 the relevant facts to see what we were doing. What
12 were our practices?

13 Then I understand that there was another
14 group that came in and did an independent assessment
15 of those practices and compared them. So the process
16 of demonstrating compliance with Appendix B was not
17 wasted solely and totally on the review that was
18 accomplished in the preparation of the attachments.

19 The attachments were something that
20 was used to facilitate the review of the letter and
21 provide some summary executive level detailed to support
22 the conclusions of the letter.

23 Q Were the technical managers asked to
24 review the specific NSRS perceptions and you have
25 number of technical managers who are responsible for

1 the various perceptions, were they asked to review the
2 perceptions and determine whether or not the facts were
3 correct or were they asked to determine whether or not
4 the program covered that area?

5 A I don't know that, if either one of
6 those statements depicts what they were actually told,
7 nor do I remember what they were actually told.

8 As I said, the intent was that in these
9 general areas we were to review the perceptions and
10 to collect the program elements that were within our
11 program and then collect information that reflected
12 the implementation of that program and then to review
13 that information and see that there wasn't what, in
14 the review there wasn't any element that would constitute
15 a breakdown or the breakdown in the quality program
16 or a missing element in the quality program.

17 Q Okay. I don't believe any of the NSRS
18 perceptions said that the program had a missing element.
19 That the program had been reviewed, topic had been reviewed
20 and proved those kinds of things, but the NSR went
21 on the implementation of it. The status of the welding
22 at Watts Bar is one of the NSRS perceptions, basically
23 that there are bad welds in the plant, and if I understand
24 what you just told me, the technical managers looked
25 at the program with respect to welding and said we had

1 a program that controlled welding, essentially a
2 quality program that addressed welding. Were they also
3 to go out and look at the welds, to do weld inspections,
4 to determine what the status of the equipment in the
5 plant was or did they focus on a review of the multiple
6 tiers of the programs to control quality?

7 A As you know, part of the intent of the
8 50 Quality Assurance programs is process of identification
9 and correction of deficiencies, and we know that there
10 are deficiencies that will occur from time to time,
11 and those deficiencies, under the program, should be
12 identified, evaluated, and of course, corrective action
13 taken.

14 So there shouldn't be anywhere, in my,
15 and my statement should not be interpreted to state
16 that there weren't any problems within TVA or that there
17 weren't any deficiencies occurred, and that there wasn't
18 corrective action being taken.

19 That's, that, in my definition is a
20 necessary element of the Quality Assurance program,
21 and that element was and has been ongoing throughout
22 this period.

23 Q I guess I would contrast that with when
24 you agreed. WTC had been involved in identifying large
25 numbers of concerns that the TVA system was incapable

1 of identifying. A lot of weld issues, some cable issues.
2 There were multiple technical issues that the TVA employees
3 could not identify or would not identify to TVA quality
4 system.

5 Part of your quality program, TVA's
6 quality program to identify deficiencies was ineffective,
7 clearly, and a lot of employee concerns, and independent
8 effort had generated a large list of technical issues
9 so that your comments that a quality program would identify
10 deficiencies and get them corrected, I agree with these
11 elements for a quality program, but TVA didn't have
12 that with respect to those issues, and so my question
13 is back again to were the technical managers asked to
14 look at the hardware, the installation, bad welds, whatever
15 the specific areas were and make a determination that
16 there was validity in any employee concern, whether
17 it be over the technical issue?

18 A Now, I think I answered that question,
19 and you know, I, again, I think the conclusions that
20 you draw from the employee concerns program and QTC
21 involvement don't necessarily reflect my conclusions
22 that I may have, and I submit that the jury is still
23 out in many areas as far as the net impact of the employee
24 concerns program on the design or on the, as installed
25 hardware at Watts Bar.

1 Q I recognize that the large number of
2 QTC issues have not been resolved and resolution is
3 pending.

4 A One issue that I would comment on is
5 the concrete issue which I don't believe was included
6 as part of this letter, but certainly was a celebrated
7 cause with respect to QTC, and I took a very active
8 role in trying to set the record straight as far as
9 the quality of concrete at Watts Bar.

10 And we spent considerable effort, and
11 I think that the net result will show that yes, the
12 concrete quality is adequate. So again, I point this
13 out primarily so that the record does not imply that
14 case of volume or magnitude of concerns, the presence
15 of ineffective management system, ineffective
16 communication tools with employees and the presence
17 of many weaknesses in the way TVA did business in the
18 past.

19 One cannot directly conclude that the
20 safety of the power plant is going to be impacted at
21 Watts Bar to the degree that the magnitude of employee
22 concerns would imply.

23 Q I would ask a very simplistic level without
24 drawing conclusions, part of the information that was
25 provided to the technical managers included the documents

1 prepared by, assembled by NSRS staff members, and I
2 ask the question just one more time.

3 Were the technical managers, the line
4 personnel asked to review those and go out and check
5 the hardware, if there was any identified specifically,
6 or rather did they focus on a paper program as opposed
7 to going out and checking hardware?

8 A Well, you know, as I pointed out **earlier**,
9 part of the program is the corrective action process,
10 and the corrective action process for any identified
11 deficiency has to run its course and has to lead to
12 evaluation of what the appropriate action is going to
13 be, and yes, the responsible managers weren't expected
14 to insure any deficiency that was identified by NSRS
15 or any other party in TVA was adequately controlled
16 and incorporated within the TVA corrective action system.

17 MR. CRAIG: Go ahead.

18 BY MR. NORTON:

19 Q Mr. Kirkebo, how did you become responsible
20 for this coordinating of the technical reviews?

21 A I think it just went with the territory
22 as far as my assigned job description.

23 Q Did anybody specifically tell you to
24 do this?

25 A No. The people that were in the line since

1 organization within engineering reported to me. Technical
2 branch chiefs reported to me.

3 So most of the effort was encumbered
4 within the organization for which I was responsible.
5 As the multi issues crossed discipline borders, and
6 I thought it was rather logical that I be the one to
7 try to coordinate it.

8 I don't mean to imply this was a full-time
9 job or anything, that was my sole challenge or function
10 in life. This is one of the duties that came with the
11 turf, as far as the job I had.

12 Q Regarding this issue, to whom were you
13 reporting the results of your efforts?

14 A To Bill Draflett (phonetically) who
15 was the Director of Engineering.

16 Q You mentioned earlier that there were
17 some reviews done in addition to the effort that was
18 taking place among the technical writers. To what were
19 you referring?

20 A I was referring to the effort that I
21 think, and I'm not sure who the responsible TVA manager
22 was, but it was accomplished by a team of outside
23 contractors who came in and took an independent look
24 at the programs and the processes that were in effect
25 at Watts Bar.

1 Q Who headed that program?

2 A I think it was Craig Lundin.

3 Q Did you have any sort of connection
4 with that technical review which Mr. Lundin's team --

5 A (Interposing) No.

6 Q Did you recommend such a technical review
7 take place?

8 A That wouldn't have been my responsibility
9 and no, I did not.

10 Q Did you receive the results of their
11 review?

12 A Only informal.

13 Q What do you mean?

14 A In other words, I worked with Craig
15 Lundin for many years, and I see Craig Lundin from time
16 to time, and I've talked with him, and in the preparation
17 of review of issuance of this letter, there were, you
18 know, interfaces, hey, these are the elements that have
19 taken place in TVA, so that's in that light. I didn't
20 interview him or talk with any of his people.

21 Q In connection with the effort to prepare
22 the technical responses, was there any coordination
23 with an effort that I've seen referred to many times,
24 review of the 300 documents or to identify outstanding
25 problems within TVA?

1 A Just so happens that before I went to
2 Knoxville I was the party responsible as a contractor
3 to TVA to effect a review of the "800 documents". So
4 that was my bag.

5 Q You were the primarily responsible person?

6 A Yes, I was responsible for that. So
7 if you have any questions about that, which in my view
8 is totally irrelevant to the question on the table,
9 I'd be more than willing to pursue that with you.

10 Q We certainly will, but let me let that
11 be handled a little bit later this morning.

12 I want to go back to covering this,
13 write-up of that interview on January the 5th, 1987.
14 The interviewee says his concurrence in the letter was
15 for Mr. Draflett, who knew he had no problems with the
16 letter and its enclosures.

17 Speaking of the concurrence in the
18 March 20th, 1986 letter.

19 A Uh-huh.

20 Q Did you sign for Mr. Draflett?

21 A Yes, I did.

22 Q Did you yourself agree with the March 20th,
23 1986, letter?

24 A Yes, I did.

25 BY MR. ROBINSON:

1 Q Why did you sign for Draflett?

2 A He wasn't available. He had a conflicting
3 schedule, and I had worked closely with Bill, so his
4 schedule was conflicting and there was a reason to have,
5 I was available and he wasn't available.

6 BY MR. NORTON:

7 Q Okay. Did you view your efforts on
8 these reviews as a Philadelphia lawyer's effort?

9 A No.

10 Q Do you recall making that comment during
11 the January 5th, 1987, interview?

12 A No, I don't.

13 Q In the March 20th, 1986, letter, there's
14 two terms I want to ask you about, Mr. Kirkebo. One
15 being at the conclusion there's been no pervasive breakdown
16 in the QA program at Watts Bar.

17 Do you know where that terminology came
18 from?

19 A I don't have firsthand knowledge, no.

20 Q What do you mean you don't have firsthand?

21 A Well, I didn't coin any of the words
22 in that letter. I, in reviewing it, understand that
23 the concept came from a previous case or precedent within
24 the industry that, along the lines that there can be
25 occasions where a program has weaknesses and deficiencies

1 and there can be many weaknesses and many deficiencies
2 over the entire construction period, design and
3 construction period within the entire effort to engineer,
4 design a nuclear power plant, and deficiencies, the
5 presence of problems and the concept that somehow the
6 whole process should be trouble-free, I know, is not
7 the case.

8 That there are problems that occur.
9 And one cannot, I don't believe, take problems or the
10 presence of problems as an indication that there is
11 not a quality program that is meeting its goals.

12 So that discussion came up, and I think
13 the terminology of pervasive breakdown was one that,
14 I think, best of my recollection, was tied to a precedent
15 somewhere else.

16 Q Where did your understanding come from?
17 You mentioned a discussion with whom?

18 A I think it was our people in the Quality
19 Assurance Department. Probably would have been Jim Houston.

20 Jim is another Stone & Webster employee.
21 He was down here in a similar role that I was in and
22 you know, we chatted from time to time about this.

23 Q About the March 20th letter?

24 A Yes. Before it was prepared, yes.

25 Q Was this a question you specifically

1 remember bringing up, what the term pervasive breakdown
2 means?

3 A Well, I think it's probably the key,
4 the key phrase in the entire letter, in my view, and
5 yes, I think that's something that each of us discussed,
6 that was discussed.

7 I know it was discussed between Jim Houston
8 and myself. As far as what it meant to us --

9 Q (Interposing) Where did Jim Houston get
10 his understanding? You referred earlier the reason
11 I asked, you referred earlier you understood it came
12 from the legal precedent from a case that has occurred.

13 A Uh-huh.

14 Q And is Mr. Houston a lawyer?

15 A No, he's not.

16 Q Do you know where his --

17 A (Interposing) Well, it wasn't, we weren't
18 talking as lawyers at the time. We were talking as
19 engineers, and we were talking that it was a general
20 discussion that there is precedent for this, for being
21 able to draw a conclusion of this nature, and that there
22 is precedent and he was giving me assurance that there
23 was precedence. Not that it related to TVA or we could
24 rely on it specifically.

25 I mean you can't equate to situations,

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1 but there was precedence in the industry, and that,
2 and we both agreed it's a valid thing and valid conclusion.

3 Q You mentioned he gave you assurance
4 that, you know, something you could rely upon that you could
5 have problems and still be, have no pervasive breakdown.

6 A No. That was my conclusion. Not his.

7 Q All right. Were you in need of such
8 assurance?

9 A No.

10 Q Were you troubled with the problems
11 existing?

12 A No. As I indicated, when we went over
13 my background, I was involved in the Riverbend project
14 and the Riverbend project, we had over, for one single
15 unit, over 10,000 non-conformances that were generated
16 and dispositioned in the execution of that single project
17 during the construction phase.

18 So the presence of deficiencies, the
19 presence, the program is to identify them, correct them
20 and resolve them and document their resolution.

21 And the Riverbend project, we had over
22 10,000, and those were the ones that we presented to
23 the engineers.

24 The balance of the ones were resolved
25 on the spot by reworking to the requirements of the

1 engineers.

2 So the presence of deficiencies, the
3 presence of things that are not, that don't get implemented
4 as they should, that's, that, to me, comes with the
5 territory as far as working in this industry.

6 Q And can it come to a point where there
7 is a pervasive breakdown?

8 A I've never seen it.

9 Q Is it even theoretically possible?

10 A Of course.

11 Q Under what circumstances?

12 A Well, I would say that there is probably
13 many, many circumstances that are, pervasive breakdown
14 would take place. To try to define one and get into,
15 try to come into a definitive position, I think, would
16 be rather difficult.

17 I would say where an element of the
18 quality program is totally out of control would be,
19 in many areas, in many areas would be my working definition
20 of a pervasive breakdown.

21 In other words, it's not an isolated
22 case or group of isolated cases.

23 Q When you say element of quality program,
24 can I, does that mean this element translates into criteria?
25 One of the criterion of Appendix B is totally out of

1 control?

2 A It's difficult to try to characterize
3 it as that.

4 Q Let me return, changing the subject
5 matter a bit. Let me return to your discussion with
6 Mr. Houston.

7 Did you have any discussions with anyone
8 else regarding the term pervasive breakdown?

9 A ~~Not that I recall.~~

10 Q Do you know Mr. Houston got the information
11 about, you know, precedent and there's another case
12 we can rely upon?

13 A You're getting, relying on another case
14 is not what we were doing. We weren't doing it in the
15 legal sense. We were saying, he was saying, hey, it's
16 his understanding that it did happen. Could have happened
17 more than once, for all I know.

18 But it was just, hey, this is not something
19 that should be viewed as being totally unusual or something
20 that should surprise anybody.

21 Q Okay.

22 A In other words, we did not sit down
23 and have a focused discussion on this.

24 Q Okay.

25 A I think we're trying to read more into

1 it than that.

2 Q Okay. My question still stands. Do
3 you know where his understanding came from?

4 A No, I don't. You'll have to ask him.
5 I hope it didn't come from me.

6 Q Well, prior to your discussion with
7 Mr. Houston, did you have an understanding of where
8 the term came from?

9 A I don't remember it ever coming up before
10 that. In other words, this was in the process of
11 preparation of the letter.

12 Q Did you attend any meetings where the
13 preparation of the letter was discussed?

14 A I don't recall any, no.

15 Q Do you recall discussing the letter
16 with Mr. White?

17 A No. I don't know.

18 Q Or Mr. Kelley?

19 A No, I don't.

20 Q Do you know where the term overall
21 compliance came from?

22 A No.

23 Q Did you have any discussion regarding
24 that term?

25 A No.

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1 Q When the technical staff was doing its
2 reviews under your coordination, were they working to
3 a standard such as pervasive breakdown?

4 A No. I don't think that terminology
5 or that, the letter didn't exist at the time those reviews
6 were being done.

7 BY MR. ROBINSON:

8 Q What part did Bob Mullin play in the
9 coordination of the technical reviews?

10 A I'm not sure. I don't know.

11 Q You felt that it was your job for, to
12 collect that technical data and review it for accuracy
13 and logic and completeness and report the results of
14 those results to Draflett?

15 A As far as how they related to engineering.
16 There were other elements in there that weren't related
17 to engineering. Some other parties were doing the same
18 thing.

19 Q You think Draflett was giving his result
20 to Mullin or you're not sure what part Mullin played
21 in the coordination?

22 A I don't remember. I really don't remember.
23 My focus was inside the engineering department, division.

24 Q Do you have an opinion on whether or
25 not the status of the corrective action program within

1 TVA's QA system was effective at the time of the
2 preparation of those technical reviews?

3 A I think, I have an opinion, yes. And
4 the opinion is that it was probably the weakest area
5 within the program, within TVA.

6 Q And what leads you to that conclusion?

7 A Just comparing it with previous practices
8 that I've seen invoked on projects in the past,
9 and based on what I've seen since I've been here at
10 TVA.

11 I have been on campaign to upgrade the
12 corrective action within TVA, both within engineering
13 and within the Office of Nuclear Power.

14 Q But it wasn't quite weak enough to indicate
15 that the program was out of compliance with Appendix B?

16 A That's my opinion, yes. But it was
17 very weak. I think we're doing a lot today to strengthen
18 that program.

19 Q Earlier you indicated that your compilation
20 of the "800 documents" was totally irrelevant to the
21 question on the table today.

22 Could you kind of elaborate on why you
23 think it was irrelevant? In other words, if you came
24 up with conclusions of quality program deficiencies,
25 and I'm not even sure what your conclusions were in

1 your report, we've got it here, we've got a copy of
2 it here.

3 A Yeah.

4 Q If during that time frame of, February
5 time frame the review and compilation of the 800 documents
6 indicates a significant problem with the Quality Assurance
7 program, wouldn't that necessarily affect TVA's response
8 to the Appendix B question?

9 A I think you have to go back and look
10 at the reasons why we did the 800 documents review.
11 First of all, it was a systematic system of criticism
12 of TVA outside of TVA. What we tried to do was to capture
13 criticism and characterize that criticism in a fashion
14 such that Mr. White and all of us could lay out a
15 corrective action plan for TVA Nuclear Power as a total
16 entity.

17 So the purpose of the systematic assessment
18 of criticism was to try to capture and categorize and
19 then look at that criticism to see if the results, and
20 it was incoming correspondence from outside of TVA,
21 to see if there were specific areas that needed to be
22 focused on and with the primary thrust of management
23 systems and adequacy of management systems.

24 It was not focused on any particular
25 element like Appendix B or like Regulatory compliance

1 or any other aspects of the business. It was focused
2 on general criticism and the intent was to capture the
3 criticism as it would be relevant to the management
4 process.

5 In other words, that was the intent,
6 and that was the direction I was given, and that's the
7 direction I gave to the team of people that went through
8 this mountain of correspondence and tried to characterize
9 and summarize it and codify, as you may know codify
10 such that it would be useful in coming up with a corrective
11 action plan in management.

12 Q In some of these external criticisms,
13 as you put them, weren't they more in the form of external
14 audits and actual findings of technical problems within
15 various TVA systems?

16 A Sure. That was one of the, that was
17 incoming correspondence from contractors, whether TVA
18 hires a consultant to do assessment of this or that
19 or whether it was incoming correspondence with NRC.

20 All of this was included within the
21 scope of that 800 documents.

22 Q And to the best of your recollection,
23 we can let you review the report, what were some of
24 the higher priority items? The items that weighted
25 the most heavily? The heavy concerns within the system.