

1 A I guess, quite apart from the systematic
2 assessment or, excuse me, the systematic review and
3 compilation of the results, we did a, on the side, a
4 study of people that were involved, and I forget the
5 exact terminology of this process, but the people that
6 were involved in reviewing the correspondence all sat
7 in rooms and said, all right, now, let's put aside all
8 the things we've been doing and let our own brain do
9 some thinking here. And let's try to characterize what
10 we've been about here for. I don't know, three, four-week
11 period.

12 And I guess I'd like to refer to that
13 report, if you'd like.

14 What I was, just given as a memorandum
15 that I prepared it for the purpose of this memorandum
16 was to transmit the results of a, well, of the assessment,
17 the results of the assessment by the assessment team.

18 BY MR. WILLIAMSON:

19 Q And that was to whom?

20 A This is a memorandum to Larry Nace,
21 who was working on Mr. White's staff at the time, and
22 the report goes, basically it's to say that we did this
23 assessment of all this correspondence and recreated
24 a data base and we're done.

25 That was the purpose of this memorandum.

1 And it talks about the process, the background and the
2 process, and then the kind of people that were compiled,
3 and in general gives an overview of how the work was
4 accomplished.

5 And the memorandum goes on to provide
6 what was termed to be a validation of the process, and
7 that is this exercise that I was just referring to where
8 we took the individuals into, split them into groups
9 and did a validation to see what, what the individuals
10 would, how they would make a cosmic assessment, if you
11 will, of the process that they'd just worked through,
12 and it's referred to in the memorandum as a nominal
13 group process.

14 The nominal group process led to, I
15 guess, the compilation of issues and concerns which
16 had, in the opinion of the group of people who reviewed
17 that incoming correspondence, had the highest, I guess
18 highest what, issues are concerned, had the highest
19 ratings in the minds of the people and number one was
20 a lack of management direction and control involvement,
21 and program monitoring.

22 And the memorandum points out there
23 was a high degree of consensus on this concern.

24 Again, this was a group of independent
25 contract people. No TVA people were involved, and then

1 after they'd go through all this correspondence, we
2 asked them to sit as groups, and as I already, let's
3 try to put this in our own words, so-to-speak.

4 The second issue or concern was a lack
5 of Quality Assurance overview and basic program weaknesses
6 characterized.

7 The third issue of the highest rating
8 was inaccuracy of program evaluation and corrective
9 action. Point out there was also a high degree of consensus
10 on this.

11 The fourth item was lack of timeliness
12 or responsiveness to identify problems. It goes on
13 through, I guess, a total of 16 items or areas that
14 were felt by the group that were high, high degree of
15 consensus was reached.

16 I might add that I was not part of this
17 group process or I thought it to be inappropriate to
18 include myself in the process, since I was manager
19 responsible for the, generating this product. I didn't
20 want to sit in on these group sessions where these people
21 were trying to put in their own words and characterize
22 the results of their efforts.

23 So I did not participate in this.

24 BY MR. ROBINSON:

25 Q Did Mr. Nace brief Mr. Whitt on the

1 results of this report?

2 A I have no knowledge of what Mr. Nace did
3 with the report.

4 Q Do you have any knowledge as to whether
5 Mr. Whitt ever got the report or reviewed it or put
6 any value to it?

7 A I don't know. I really don't know what
8 was done.

9 BY MR. WILLIAMSON:

10 Q You're aware of the conclusions that
11 had been reached or the areas of discussion?

12 A I certainly --

13 Q (Interposing) That you sent to
14 Mr. Nace? And this memo, I think, was dated February 14th,
15 1986, and you said February the 18th, 1986.

16 A That's when I got out of business and
17 went up to Knoxville and became a loan manager to TVA.

18 Q So you're well aware of some of the
19 issues that you mentioned, primarily the lack of management
20 direction, control involvement and program monitoring,
21 the lack of Quality Assurance overview and basic program
22 weaknesses?

23 A Uh-huh.

24 Q You were aware of those issues at the
25 time you started working as a loan manager?

1 A Yes, and I'm still aware of --

2 Q (Interposing) Did your knowledge of
3 those issues influence your position with regard to
4 the review of them and comments for the March 20th letter?

5 A No.

6 BY MR. ROBINSON:

7 Q Why didn't it influence you?

8 A Well, again, I viewed this as a total
9 TVA office or total TVA nuclear power program effort.
10 The March 20th letter was limited to Appendix B, Quality
11 Assurance program implementation and adequacy at the
12 Watts Bar facility.

13 This dealt with BrownsFerry, Sequoyah,
14 TVA corporation, TVA in toto. There was nothing at
15 all about this letter that was focused on the Watts
16 Bar or anywhere else. It included TVA across the board.

17 BY MR. NORTON:

18 Q TVA Nuclear across the board?

19 A TVA Nuclear across the board. That's
20 correct.

21 BY MR. CRAIG:

22 Q Did you have any reason to believe these
23 results and conclusions were as applicable to Watts
24 Bar as to Sequoyah or any other TVA facility?

25 A No, I did not.

1 BY MR. MURPHY:

2 Q Would you characterize that first off
3 with the individuals who compiled this data in your
4 opinion qualified people?

5 A Absolutely.

6 Q Would you also characterize this report
7 as an independent review, an outside, I mean, you know?

8 A There was nothing, I had no, I had no
9 ties to TVA. I was a contractor in here assigned to
10 do a task, and the entire team of people that was working
11 for me, that were working for me and working with me
12 were all outside personnel. They were not TVA personnel,
13 and we had no limits or no, you know, we weren't given
14 any guidance or any controls or any direct limitations
15 on where we should go by anyone.

16 Q Then --

17 A (Interposing) That I would characterize
18 it as independent, yeah.

19 MR. MURPHY: Independent.

20 BY MR. WILLIAMSON:

21 Q And tell me again who directed that
22 this, what's it called? Systematic analysis identified
23 concerns/issues of TVA?

24 A This was directed by Larry Nace.

25 Q That this be conducted?

1 A That' correct. And Larry Nace was a
2 Stone-Webster employee reporting to Mr. White on his
3 staff.

4 Q And there were 23 people that reviewed
5 all of these issues over, I think, a ten or eleven-day
6 period. January the 20th to January 31st, is that correct?

7 A That's what it indicated here on my
8 memorandum. As I recall, the process took a little
9 longer than January 20 to January 31st.

10 In other words, that was an eleven-day
11 period as you pointed out. I think it took us a little
12 longer than eleven days.

13 I do guarantee we worked on it on
14 Super Bowl Sunday. That weekend. So it was a concentrated
15 effort. But I think it took a little longer than
16 eleven days. Not more than three weeks. Somewhere,
17 talking about the difference between eleven days and
18 twenty-one days. That's about the duration of the effort.

19 BY MR. NORTON:

20 Q Was there any other follow-up on this
21 report at all after you sent it to Mr. Nace? Did you
22 hear anything further regarding the systematic analysis
23 report?

24 A I know this was utilized by the parties
25 responsible for preparing Volume 1. In other words,

1 we made available this data base and the responsible
 2 parties, in preparing Volume 1, the Nuclear Performance
 3 Plan that outlined in general the corrective action
 4 program, that we were going to implement, this data
 5 base was sorted and given to people and we made, and
 6 here again, I backed out of it. I turned, I didn't
 7 have custody, but custody and control was turned over
 8 to somebody else, and people were taking sorts out of
 9 this. You can get sorts by power plants.

10 In other words, very flexible data base,
 11 and you could go in there and say, let's look at the
 12 elements and say, there's a range of planning.

13 You can find out what power plants,
 14 what specific, the criticism was and it was summarized
 15 on each document. It was summarized so this was out,
 16 it was used by how many people, and specifically how
 17 they did it, it varied, you know, across TVA, best of
 18 my knowledge.

19 Q I understand data base, but I mean this
 20 written report itself, the 11-page report, was there
 21 any follow-up, to your knowledge?

22 A Not to my knowledge, it wasn't. This
 23 was for the record to say it was done, and it was available.

24 BY MR. WILLIAMSON:

25 Q And what did this systematic analysis,

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1 the final product mean to you? How did you view the
2 final product?

3 A How did I view this final product?

4 Q Yes. You had, you prepared a letter
5 for Mr. Nace?

6 A Memorandum.

7 Q Memorandum. You reviewed it?

8 A Yeah.

9 Q And how did John Kirkebo view this
10 systematic analysis, the results of it?

11 A I supported it. In other words, I think
12 it was correct. I think it was a good process, **yes.**

13 Yeah, I think it was a good process. It was a rather
14 unique process. It was a process that we developed
15 here. It was based on, I don't of any, I guess people
16 do reviews of correspondence, but I don't think there
17 was any precedent for doing this type of analysis, and
18 I think it, you know, was, in my mind it was intended
19 to provide a foundation for a new set of managers, new
20 set of management and new plan.

21 How can we characterize the weaknesses?
22 We're collecting a team of new people to provide
23 leadership in TVA Nuclear Power program. They needed
24 some tools, and I think what we created here was a tool
25 to be able to allow them to gather the kind of information

1 and gather the weaknesses that have been identified
2 and proposed corrective action.

3 Q And after this was submitted on
4 February the 18th, you became in a position to review
5 some of these concerns and address some of these concerns?

6 A Well, after I was, you know, February 18th,
7 once I got into a line position on TVA and I was responsible
8 for trying to correct these problems, in other words,
9 try to establish a plan of action that wouldn't, that
10 would not cause this type of criticism to come in again,
11 yes. That's what, among everyone else, that's what
12 we were supposed to be doing.

13 BY MR. NORTON:

14 Q Hypothetically, Mr. Kirkebo, if the
15 systematic analysis report had been tied specifically
16 to Watts Bar, would you agree that it would have been
17 very relevant to the NRC response?

18 A Yes.

19 BY MR. MURPHY:

20 Q Were not some of the same criticism
21 that you developed here corrective action problem,
22 lack of timeliness, responses and things like that,
23 weren't some of them kind of what NSRS was saying in
24 their perceptions? I mean you've identified, when I
25 view that thing and maybe just my view, that you've

1 identified a quality problem within the initial ten
2 areas or at least it appears to me there was a Quality
3 Assurance problem in the areas. Was there no connection
4 in your mind between those problems that exist throughout
5 TVA and what NSRS was saying about Watts Bar?

6 A You know, I hope I don't come across
7 as saying that TVA doesn't have quality problems. All
8 right. TVA has quality problems. TVA had, in these
9 periods, problems in being effective in just about every
10 area of their operation, and to my mind quality, and
11 assurance of quality is probably the most fundamental
12 and paramount area that's going to lead to success in
13 this industry.

14 If there's anything that I think I
15 understand and that I'm committed to is the Quality
16 Assurance program for my area of responsibility, which
17 is now engineering. And it's something that I've put
18 emphasis on throughout my career.

19 In other words, I knew that the Quality
20 Assurance program and the generation of objective evidence
21 to document quality was equally as important as the
22 technical process and technical work that I was doing,
23 and I have never lost sight of that, and gentlemen,
24 believe me, that, to me, is the, is in my mind one of
25 the absolute prerequisites for success in this industry.

1 and does TVA have problems?

2 I mean if you start out with the number
3 of issues, lack of management direction, control involvement
4 and program monitoring and try to tell me there aren't
5 problems there. Yes, there are significant problems
6 in management and the effectiveness of management, and
7 of course, that's going to have an impact on the effectiveness
8 of a Quality Assurance program, and yes, it was impacted
9 and yes, the Quality Assurance program within TVA needs
10 upgrading in many, many areas, and as I indicated earlier,
11 the corrective action program is something that I've
12 made a campaign of.

13 I mean it's fundamental, maybe to you,
14 maybe, I mean it's obvious to you that the biggest business
15 we're in here at TVA is corrective action. That is
16 the business we're in, and the program that we accomplish
17 that corrective action under has to be effective. It
18 has to have people trained. We have to know what we're
19 about and has to have a wide degree of acceptance.

20 When we came to TVA the corrective action
21 program was fragmented, as you know. It was, every
22 organization had their own corrective action process,
23 and they didn't talk to each other. And now we've issued
24 a one corrective action program for all of TVA. So you
25 know, don't think that I can sit here and say that the

1 implementation of the Quality Assurance program at TVA
2 was where it ought have been. It wasn't where it should
3 have been. It had many weaknesses. It had weaknesses
4 in areas that, you know, that I found fundamentally
5 flawed such that you tied yourself up in trying to execute
6 that program.

7 It could be executed. It could be done,
8 and TVA was doing it, but it was so complicated and
9 so, and in some cases, difficult to put all the pieces
10 together. It wasn't a straightforward Quality Assurance
11 program, and now we're trying to take these things away
12 from it and simplify it and streamline it.

13 So it's obvious how business is accomplished
14 and how you generate the objective evidence that business
15 has been accomplished right and how you get the independent
16 test and documentation results that support the effort
17 that's then undertaken.

18 We are overhauling the program here,
19 and when you have to overhaul something you've got to
20 admit that there were weaknesses.

21 Now, the weaknesses were such that the
22 program was damn difficult to implement, in my view.
23 It was not anything close to the quality program that
24 I'm used to with my experience. But yet, I think the
25 way it was being implemented, and you have to use many

1 implements to get that assurance, that it goes back
2 to my statement earlier, when all is said and done,
3 and it isn't all said and done yet, we'll find out that
4 TVA has had a commitment to quality all along.

5 TVA's appreciation for Quality Assurance,
6 appreciation for satisfactory management, ethics has
7 been what's missing. Commitment to quality has been
8 there. It's fundamental. It's been in TVA for the
9 last 50 years, and I'll defend the commitment that TVA
10 has to quality, but I'll say that TVA's appreciation
11 for Quality Assurance, assurance that that quality is
12 there, that's the fundamental ethic that was missing
13 within TVA.

14 The program was there. The quality.
15 We've got the quality there were, almost slipped up
16 there, yes, there were numerous deficiencies and the
17 method for correcting those deficiencies was tedious
18 and difficult, and it wasn't effective. It wasn't cost
19 effective, but it was there. And it was not a pretty
20 picture.

21 BY MR. CRAIG:

22 A In your structural welds, do you have
23 a figure estimate in your mind right now about the number
24 of welds that are being reinspected and number of welds
25 that are being determined to be unacceptable?

1 A Well, I know we have a large program
2 at Watts Bar to go back and do a, reinspect about every
3 type of welding, and I know it's a large program. I
4 have not been briefed. I have been briefed on the specifics,
5 but I can't recollect them right now.

6 Q Do you have any feeling at all for the
7 number of welds that are being identified today as being
8 unacceptable?

9 A Well, I think, you know, we get into
10 the number of welds that have indications, and then
11 we go through an evaluation to see whether those
12 indications lead to unacceptable welds. I know there's
13 a lot of statistics that have been published, concerning
14 **the** number of components that have deficiencies, but
15 you have to process these deficiencies, as I indicated
16 earlier, we have 10,000 things.

17 Q I recognize that, but I guess the point
18 is that there's a difference between a disposition of
19 a deficiency in 1987 use as is ultimately it's acceptable
20 as opposed to the identification of a deficiency which
21 should have been identified somewhere months or years
22 ago.

23 It's a deficiency that we're finding
24 now, should have been identified before.

25 A Right.

1 Q So that the identification of the
2 deficiency and entering those deficiencies and corrective
3 action program which should have happened years ago,
4 didn't happen, and that tells us something about that
5 aspect of the Quality Assurance program.

6 The individuals who inspected a whole
7 string of processes, and you indicated a minute ago
8 you thought TVA was getting quality. I assume you meant
9 a quality product, and I wondered if you believe that's
10 true specifically from your structural welding.

11 A Well, I think there have been weaknesses
12 in the program for inspection of structural welding,
13 and I acknowledge that we have recently characterized
14 a certain population of welds at Watts Bar to constitute
15 a significant breakdown in our Quality Assurance program,
16 and I agree with that conclusion.

17 Yes, I feel that the program for inspection
18 of welding has been, you know, an area where, you know,
19 we're focusing on it today.

20 Yes, it wasn't where it should have
21 been in the past. And again, if the program had been
22 in effect in the past, I think the problems that we're
23 finding today would have been corrected in the past.

24 In other words, the standard would have
25 been understood. There wasn't that good a corrective

1 action program so there was feedback and corrective
2 action people knew, hey, that's the accepted standard.

3 Again, part of the process is still
4 evaluating, you know, you want the engineers to evaluate
5 the deficiencies.

6 Q When they're identified?

7 A Yes. That's timeliness. Lack of timeliness
8 was, would be issues that were pointed out here. And
9 again, that's, I think the weakness that we're both
10 pointing out.

11 BY MR. ROBINSON:

12 Q Going back to the original NSRS "bullets"
13 that we were, TVA was responding to in the March 20th
14 letter, were you responsible for the overview of just
15 a certain select of those "bullets" or were you looking
16 at all the technical responses to all of those "bullets"
17 in your role in engineering?

18 A Just the ones, just when engineering
19 was involved. I didn't feel responsible for all the
20 enclosures, no.

21 Q Do you remember approximately how many
22 of those "bullets" you were responsible for?

23 A I really don't remember, but I would
24 think it would be about half of them or little more
25 than half.

1 Q And when you prepared the books of the
2 supporting documentation or you gathered the books of
3 the supporting documentation --

4 A (Interposing) I didn't gather. The
5 people did it, right.

6 Q Did you review the final executive summaries
7 that were going to be included in the letter?

8 A Yes, I did.

9 Q And did you feel those executive summaries
10 were adequately supported by those documents?

11 A Yes, I did.

12 Q And did you feel that in anyway the
13 executive summaries themselves, or the cover letter
14 that covered those executive summaries was misleading
15 in anyway to the NRC about the status of TVA's Appendix B
16 compliance?

17 A Absolutely not.

18 Q And you were essentially able to segregate
19 your duties in the review and forwarding of those "bullet"
20 technical responses from the findings in the overall
21 systematic analysis that there was no intermingling
22 of those results in your mind at the time?

23 A I didn't equate the two processes in
24 that sense. I did not equate the two processes.

25 Again, I was primarily equating it with

1 my experiences on Riverbend. Riverbend was, just obtained
2 a license and I was just off that job. I looked at
3 the material that I saw here based on my understanding
4 of what I was reading and what I could discern from
5 discussions, comparing it back with my experience, asking
6 questions, did we do this, did we do that, how did we
7 control this, how did we control that?

8 That's how I gained my personal confidence
9 that the program that had been implemented, although
10 it wouldn't have been the program I was used to and
11 wouldn't be the program that we were going to have in
12 the future, was adequate, and that's how I could support
13 the letter.

14 In other words, I was using my experiences.

15 BY MR. WILLIAMSON:

16 Q Mr. Kirkebo, did you say that a year
17 go when you arrived at the TVA, the corrective action
18 program was ineffective?

19 A I don't think I said that. I said it
20 was very weak and very complex and difficult to implement.
21 And inefficient.

22 It will get you there, but boy, it takes
23 you a long time. And there's lots of ways that the
24 system was not close to anything that I'd ever worked
25 with.

1 BY MR. MURPHY:

2 Q Let me ask you a question.

3 We've characterized the study of that
4 as an independent review of TVA. Did you review the
5 line organizations technical responses as such?

6 Let me clarify that. NSRS, the individuals
7 who come up with the perceptions have publicly stated
8 that what has happened in this case was that TVA referred
9 the problems addressed in the perception, thier perceptions
10 to the same people who created the problems and therefore
11 their responses were biased, at least to the degree.
12 How would you expect somebody whose been doing the job for
13 ten years and come back with the response "I'm not doing
14 my job."

15 Was that taken into consideration at
16 all?

17 A It was certainly taken into consideration
18 in my mind. In other words, I was very much concerned
19 that this letter wasn't factual and I indicated in response
20 to a previous question I used my experience to ask many
21 questions about certain elements of this and say, now,
22 did we do this?

23 And they said, no, we didn't do that.
24 I say, "Gee whiz, how could you not do that?"

25 He said, well, we did it this way and

1 we did it that way. What evidence do you have of that?

2 Well, here's how we did it.

3 In other words, I questioned people
4 about these areas and, until I could convince myself
5 that there was an adequate set of controls. Not the
6 best of controls. Not the kind of controls that I'm
7 used to, but I didn't rely on written words coming from
8 line staff, part of the old organization, and gave me
9 confidence in this area based on their conclusion.

10 Again, I tried to convince John Kirkebo
11 that I could personally support this letter, and by
12 the way, I would not characterize the people that were
13 working on this as being defensive or trying to, trying
14 not to be for the right.

15 I was, I was pleased, and I continued
16 to be pleased with the attitude of the people in TVA,
17 and you have to recognize, however, that some of the
18 people don't have the broad based experience that you
19 gentlemen have and that I have as a result of seeing
20 programs implemented with different, on different plants
21 and in different times, and these people are used to
22 one program, and it's difficult for them to understand,
23 as we discussed earlier, it's a tiered program, and
24 they get used to implementing this program the way it's
25 written, and they think it's swell. Where I could come

1 in say golly, that's so difficult to implement in that
2 fashion. If you restructured it it could be much simpler
3 and people would understand it and you won't have these
4 problems.

5 You wouldn't have these deficiencies
6 popping up, because it would be clear what the requirements
7 are.

8 And that's what we're trying to do.

9 Q Was any effort made by yourself or a
10 member of your staff that was working on these concerns
11 to coordinate the ultimate technical positions with
12 the folks in NSRS, ask them to render their opinion
13 as to whether this satisfied their concerns?

14 A If it wasn't done it should have been
15 done. I wasn't smart enough at the time to recognize
16 the appropriateness of doing that.

17 There was no discussion of it. It was
18 never mentioned. I didn't think of it. It wasn't mentioned.
19 If it had been mentioned and somebody would have recommended
20 it to me or if I would have thought of it, I would have
21 done it.

22 Again, I got involved in this thing
23 in the middle, as you've probably talked to other people,
24 this effort was ongoing for some period of time, and
25 had, and in subsequent areas I've had the same problem.

1 I've had concerns come up to me, somebody
2 has a concern, here's the engineering response, it comes
3 up to me as the senior man, engineer to solve. Have
4 you talked to the guy who had the concern? No. We
5 were just going to transmit them. Take it back and
6 talk to the guy.

7 Next time I saw the thing it had been --
8 so the concern had some validity, and we said, okay.
9 Now we understand the question. We understand why you
10 have the question. Here's the thing you didn't understand,
11 and it was surprising.

12 So that has happened, and it's important.
13 Having to do it all over again, I would have welcomed
14 the opportunity to sit with the people that had been
15 part of the NSRS and that was just -- just to add something,
16 the NSRS was something outside the QA program at TVA.
17 If you can imagine, if you understand QA programs, you
18 understand how can you be an auditing investigative
19 body that's getting into the element of your quality
20 program and have it outside your program so that the
21 process to resolve the issues isn't, just, how can you
22 have management that way.

23 We all know you have to have an
24 organization to investigate. You have to have a process
25 with your organization to resolve these concerns. That's

1 underlying, why we're sitting in this room today.
2 in my view.

3 BY MR. NORTON:

4 Q Referring back to our earlier discussion
5 about pervasive breakdown, Mr. Kirkebo, you mentioned
6 that you'd never seen one. Did the systematic analysis
7 report, did that describe a pervasive breakdown in QA
8 within TVA Nuclear overall? Not tied to any specific
9 plant?

10 A No, I don't think so, no.

11 Q Did it describe a substantial breakdown?

12 A Again, it wasn't, this report wasn't
13 directed at Quality Assurance or Appendix B programs.
14 It does depict a pervasive breakdown in management,
15 yeah.

16 I'll give you a pervasive breakdown
17 in management.

18 Q Okay.

19 BY MR. CRAIG:

20 Q To follow in that question a little
21 bit more, it wasn't directed for Appendix B. In general
22 terms can you have an effective Quality Assurance program
23 that are described in the documents that you wrote,
24 if you have lack of management direction, lack of QA
25 overview, inadequacy of problem evaluation and corrective

1 action, lack of timeliness, I'm not going -- can you
2 have an effective QA program that has these kinds of
3 weaknesses in it?

4 Lack of change of design control, lack
5 of understanding of Regulatory requirements?

6 A I think that, again, we're going to
7 have a little difficulty communicating in that in my
8 mind we separate the two.

9 Your question appears to be a rather
10 direct question, but it's not, in my view, a direct
11 question.

12 In other words, we have to look at it,
13 first of all you have to look at the intent of this
14 systematic assessment. That was to assess criticism
15 and then we asked the people to rank the concerns in
16 their mind as far as, as a group, which ones come to
17 the top and which comes to the bottom and which ones
18 are, are worth mentioning and which ones aren't worth
19 mentioning.

20 Again, that is a judgmental process
21 and not a quantitative process. You could do this process
22 in any organization in the world. You could do that.
23 You could come in with those concerns which have the
24 highest, which have the lowest. You could do that.
25 You could take this terminology which was prepared by

1 a group of engineers and take this terminology and the
2 selection of words was not selected to be, ever to be
3 used in a formal, rigorous sense.

4 In other words, this was as open to
5 characterization as possible. It's not possible in
6 my mind to provide a direct and straightforward answer
7 to that.

8 In other words, this process was focused
9 at trying to find out hey, what message do we have to
10 get through to the new management to be able to establish
11 a corrective action program?

12 Q Let me ask you --

13 A (Interposing) That's the purpose of
14 this.

15 Q Any one of the new managers that would
16 be working for you that were to read this report, would
17 you expect that in a minimum it would suggest to him
18 that there might be significant Quality Assurance problems
19 in the TVA organization?

20 A Yeah.

21 Q Okay.

22 A Yeah. Here again, you know, I don't
23 want the record to show such a, this having been here,
24 having been involved in this whole process, I think
25 that there are an awful lot of various, where, when

1 I look at the design control, that's the big bag for
2 engineering, and that's one of the issues. I mean we
3 are fundamentally restructuring the design control at
4 TVA.

5 Now, John Kirkebo, did the previous
6 design control program comply with Appendix B?

7 In my opinion, my answer is yes.

8 Was it any good?

9 It was so marginally adequate and
10 inefficient that it led, it almost created as many problems
11 as it solved.

12 If it was implemented and if it was
13 allowed to do its thing, would you get to the end?

14 The answer is yes.

15 Did it need a wholesale redo?

16 Yes.

17 Now, that's what I've been trying to
18 communicate today and not to try to communicate the
19 fact that there was, that I'm trying to be defensive.
20 I'm not trying to be defensive. I'm getting the feeling
21 that you think I'm trying to be defensive.

22 I'm trying to give you the best
23 characterization that I can, and also to say that it
24 is a lot of changes that we have made and we're going
25 to make more.

1 BY MR. NORTON:

2 Q Mr. Kirkebo, let me follow up on your
3 analysis of the design control area which was marginally
4 adequate when you arrived here.

5 Extrapolating that into the time when
6 you were reviewing the March 20th letter and you signed
7 off concurring on it and basically agreed with the letter,
8 was that your feeling, in other words, that yes, we
9 do have a program that's overall compliance with
10 Appendix B, but in your mind just marginally adequate?

11 A I think at the time I was just starting
12 to explore the specifics of the design control program.
13 This really was the, this was one of the first times
14 that I had a chance to interact with the technical staff
15 and focus on some of the areas that NSRS had identified
16 and led John Kirkebo to find out some of the specifics.

17 Really I hadn't been involved in the
18 specifics of engineering. I was down here looking at
19 criticism coming from the outside. I had no knowledge
20 I was heading for Knoxville.

21 I didn't know I was going to wind up
22 there. I thought I was going down here to do these
23 things for Mr. White and his staff.

24 So at the time I was looking at this
25 letter, it was really when John Kirkebo was just starting

1 to find out, hey, this is the design control program
2 at TVA, and yes, I questioned it at length.

3 I said, "Well, gentlemen, I don't agree
4 this is the fundamental design control as executed.
5 I think there's much more straightforward and efficient
6 ways of doing it, but I did question it to the degree
7 that I convinced myself yes, you can do business that
8 way and yes, you can get to the end that way.

9 Q Barely?

10 A Yeah. But it certainly isn't efficient.
11 It certainly can cause as many problems implementing that.
12 You'll cause a lot of problems for yourself. There's
13 a more direct way of doing business that will cause
14 things to happen correctly and you won't get yourself
15 tied up in a lot of problems that, you will struggle
16 and struggle and struggle, but ultimately you will solve
17 those problems with that system.

18 Q Let me ask you a very straightforward
19 question. When you signed off on the letter of March 20,
20 1986, was it your feeling that yes, we're in overall
21 compliance and then just kind of by the skin of our
22 teeth?

23 A Well, what was in my mind was let's
24 get the past, yes, I think the past is adequate. Whether
25 it's barely adequate or just a little better than barely

1 adequate, I thought that we had a program that is, I
2 was focusing on the future.

3 Frankly, my intent was, I did review.
4 I was satisfied that there was the necessary elements,
5 just the necessary elements, and I'll say barely that
6 would have constituted an Appendix B program from my
7 purview, my opinion from engineering based on my background.

8 I was primarily interested in saying
9 let's get rid of the past. We know we've got to have
10 a license at Watts Bar, and I just lived through getting
11 a license on Riverbend. I knew the degree of assurance
12 and degree of tests that was going to have to be applied
13 to that plant.

14 So I wasn't preoccupied with that document.
15 I didn't think this was a watershed event. I thought
16 this was something that hey, we looked at it. Let's
17 get it behind us. We know we're going to have to get
18 a license on Watts Bar. We know we're going to be looking
19 at a lot of things. We're going to have to go all the
20 way through the process.

21 I didn't know how many at the time,
22 but I was trying to say let's get this behind us so
23 we, I won't say that what I saw was much more than the
24 minimum I thought necessary for compliance.

25 MR. MURPHY: It's getting close to the

1 time, and I think we probably have some more questions
2 for Mr. Kirkebo. Why don't I quit now with the option
3 of getting together at a later date.

4 BY MR. CRAIG:

5 Q Ask you one more question.

6 Don't want to lose my train of thought.

7 You just stated that you had an appreciation
8 for the degree of assurance necessary to go through
9 the licensing process based upon your experience at
10 Riverbend. Do you believe that the TVA personnel, TVA
11 personnel with whom you were interacting, had a similar
12 appreciation of the degree of assurance that was necessary
13 to license a power plant?

14 A I don't think they did, no.

15 BY MR. ROBINSON:

16 Q Just one more.

17 This unwieldy situation up in the design
18 control program that you found when you came here, you
19 said that you know if it were implemented it would --

20 A (Interposing) It will get to it.

21 Q Was it being implemented?

22 A Yes. Not rapidly.

23 Q Okay.

24 A But the program was being implemented.

25 Now, I'd really like to wrap this up if we can.

1 Q Okay. That was my only question.

2 MR. MURPHY: Let's conclude the interview
3 now with the option of getting back with you at a later
4 date.

5 THE WITNESS: Yeah. I said if you have
6 anything, you know, I said 12:15, that would be fine.
7 If that's another ten minutes, because I'm just going
8 to take over in a new job next week and I know what
9 you're doing is important, but --

10 MR. MURPHY: (Interposing) We fully
11 understand your position and we appreciate you taking
12 the time to come and speak with us today.

13 I do have closing remarks that I must
14 ask you.

15 BY MR. MURPHY:

16 Q Mr. Kirkebo, have I or any other NRC
17 representative here threatened you in any manner or
18 offered you any reward in return for this statement?

19 A No.

20 Q Have you given this statement freely
21 and voluntarily?

22 A Yes.

23 Q Is there any information that you would
24 like to add to the record?

25 A No.

1 MR. MURPHY: The time is 12:07, and
2 we conclude this interview, February 26, 1987.

3 (Thereupon, the interview was concluded.)
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CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the UNITED STATES NUCLEAR REGULATORY COMMISSION in the matter of:

NAME OF PROCEEDING:

10 CFR 50, Appendix B

AN INVESTIGATIVE INTERVIEW OF:

John A. Kirkebo

DOCKET NO:

PLACE: Lookout Place
Chattanooga, Tennessee

DATE: February 26, 1987

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission.

(Sigt) *Dorothy D. Banks*
(Typed) Dorothy D. Banks

Official Reporter

Reporter's Affiliation

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