

1 (Brief recess.)

2 **BY MR. MORPHY:**

3 Q It's now 2:46 p.m. We're on the record,
4 again.

5 When we left we were talking about how
6 in-depth your survey was, and we covered that pretty
7 well.

8 Let me ask you about the technical reviews
9 done by the line organization. Do you review -- I mean,
10 realizing they have only covered one bullet or one NSRS
11 perception, as I recall, do you view them as in-depth
12 reviews that would render a clear decision on the issue?

13 A Individually, maybe some of them were. But,
14 in general, no. In general, it was -- the first drafts
15 were an attempt to answer -- this is my opinion, appeared
16 to be an attempt to answer as rapidly as possible, you
17 know, a concern without maybe full knowledge of what the
18 concern is.

19 And the first drafts of some of them
20 asked -- were totally different than what the question
21 was, you know. I mean, when we got the backup to the
22 question, we found out that the answer didn't relate to
23 it. It was really another thing that brought that
24 question.

25 So, we had to redo the answer because, in

1 fact, the line organization didn't know exactly what the
2 problem was. Of course, I always thought a telephone
3 could take care of that. But in this case, it wasn't
4 working.

5 Q In the final analysis with the -- I guess
6 they were called the executive summaries, do you think
7 the executive summaries adequately addressed each one of
8 the NSRS's perceptions?

9 A I can only speak to that, in general,
10 because I can't recall specifically pouring over all of
11 those.

12 By that time, I was essentially looking into
13 other things in the QA organization to see what had to be
14 done, if anything, and assist the new QA director at
15 Watts Bar to get a hold of things.

16 Q Was the idea ever -- did anyone ever mention
17 the possibility of taking the final bottom line of the
18 line organizations to NSRS and saying -- I mean, do you
19 agree with this? I mean, does this seem to answer your
20 question?

21 Do you know if that was ever done or ever
22 suggested being done?

23 A I have no idea.

24 Q You weren't involved in it?

25 A I wasn't involved in that.

1 Q Would that have been a good idea, in your
2 opinion?

3 A I like to think I sort of did that myself
4 when I talked to them and I said, "I really don't think
5 you came up with the right conclusion. I really don't
6 think you had the backing to come up with a conclusion."

7 I am having a hard time at that time coming
8 up with some of the, even facts, you know. That's when
9 they told me they were redoing another backup sheet,
10 which they had been working on for quite sometime. I
11 didn't feel uncomfortable saying that.

12 I knew a couple of these guys. I mean, Mike
13 Harris and I worked together several years ago. So, I
14 knew these people. Still do.

15 No, I generally did that. By that time I
16 had, you know, was starting to form a conclusion of my
17 own and felt it was worth just sitting around a table and
18 talking about it. Everybody is entitled to their own
19 opinion, and I was just shooting the breeze about it and
20 trying to get some more, you know, maybe somebody could
21 steer me in another direction and say, "Hey, you didn't
22 think about this."

23 That was the whole intent of my discussion,
24 but it was basically to present a different conclusion,
25 partly. One of the things I talked to them about was to

1 present the possibility that the conclusion was
2 inappropriate, you know. So, it was kind of discussed by
3 me. That was much earlier and not for the same purpose,
4 but I thought about that sort of thing, just talked to
5 people.

6 Q Were you aware that, as a result of your
7 visit, they were told to go dig up, you know, go find
8 some answers to some of the questions that were brought
9 up, were you aware of that?

10 Was that brought up by DOL that your visit
11 caused them to --

12 A No. As a matter of fact, I don't know what
13 they did after that. I know they were in the middle of a
14 go do, because probably given the information that their
15 first set I said was no good, they could -- this is
16 conjecture on my part, but it's very possible they could
17 have heard that I reviewed the first ones and I didn't
18 think they were adequate, and they were told to go do it,
19 again.

20 They had just spent -- this was a Friday and
21 they issued it on Monday, but they had spent two weeks,
22 seven days, two or three weeks working on this. They
23 told me that day. They said, "Hey, we have been working
24 on this for a few weeks to put together another set, more
25 detailed." And I didn't get to see it that day, but it

1 was issued on Monday.

2 Q Did you ever see that final addition?

3 A Yes, I saw that.

4 Q Do you think that they supported their
5 contentions?

6 A Not much more. Not the conclusion. They
7 supported some of the contentions in more detail, and
8 obviously, added some more. I saw it on Monday.

9 Q But you don't think that supported their
10 bottom line that TVA was not complying with --

11 A It still didn't support the bottom line. As
12 far as I am concerned, the sweeping statement that 10 CFR
13 50 isn't being complied with is a significant tech mark.

14 If there's a set case where this is a
15 problem because we didn't comply with 10 CFR 50 in that
16 area, I can understand that and I can deal with that.
17 But the concept of not complying with 10 CFR 50, as a
18 whole, you know, is pretty, you know.

19 Q In the 11 areas they said that you're not
20 complying with it, did you interpret it to mean that?

21 A I interpreted it, because of these 11 areas,
22 10 CFR 50 isn't being -- these are examples of why we
23 make the conclusions because some of those things were
24 not out of compliance. They had been fixed. In some
25 cases, to the NSPS's satisfaction and had been closed out

1 issues. So, you know, I interpreted it, to the best of
2 my knowledge, the way I was lead to interpret it.

3 Q Does it mean that TVA was not in compliance
4 within Appendix B or that TVA was not complying with
5 Appendix B in certain areas or is there a differential?

6 A Well, obviously, there's a differential.
7 But I took it as saying, "We're not complying with 10 CFR
8 50 at Watts Bar."

9 Now, I viewed that as not that there was no
10 attempt, but there was some slice that was totally
11 missing of the process. And they gave a lot of examples
12 with 10 CFR 50, there was an issue that was an issue,
13 possibly, because 10 CFR 50 wasn't compiled with.

14 In some cases, it wasn't that reason, but in
15 some of them it was. And they did present some issues
16 that were old issues that had been resolved that, yes,
17 were cases that 10 CFR 50 was not compiled with.

18 As a result, there was some determination of
19 that either by them or by the NRC, you know, the
20 appropriate routine was, then, implemented and closed.
21 Because they were given all kinds of issues, some open,
22 some closed, I felt that they were telling me that there
23 was some major disconnect in the program that flat out
24 just wasn't being done any time at all, period.

25 Q Let me ask you this. In the letter that

1 you -- I guess, a letter. A two-page memo that you
2 prepared as a result of your group study, you said you
3 found no indications, I think, that Appendix B wasn't
4 being compiled with. I have that letter I can read.

5 A I would have to read it.

6 MR. NORTON: What are you looking for?

7 MR. WILLIAMSON: John has got it.

8 THE WITNESS: My memo to Mason?

9 BY MR. MURPHY:

10 Q There's kind of a bottom line on that on the
11 second page.

12 (Witness reviewing document.)

13 Q Would you read that?

14 A "No activities were noted nor information
15 received which would be considered to be in
16 non-compliance with 10 CFR 50 Appendix B."

17 Q Does that statement mean they are in
18 compliance with Appendix B?

19 A No.

20 Q Okay, that's fine.

21 BY MR. CRAIG:

22 Q I want to interject. You indicated that
23 NSRS raised a number of issues that were open and a
24 number that were closed. The 11, I believe, perceptions
25 that they have here, this is from the slide, the first

1 one is "As constructed welding programs indeterminate
2 element was open," is that correct?

3 A There was a question as to whether there was
4 a problem in welding. I don't know whether it was
5 determined that it was indeterminate, but you know --
6 what you're asking me to do is to tell you which ones
7 were closed.

8 Q Which ones you considered closed?

9 A I will rely on my memory because --

10 Q I have the March 20th response, too, if you
11 want to look to at that, if it's better.

12 A I don't think that --

13 Q Okay.

14 A Well, the one we found is the lack of
15 independence of QA/QC personnel. When I asked about
16 that, they said, well, you know -- well, that changed in
17 1981. So, yes, there was a problem but I didn't get
18 identified as to where there was a problem, now. We did
19 investigate, you know, talk to a lot of people.

20 Those were still under construction up until
21 recently, but we didn't find any specifics at that time
22 that gave it a problem. This included just batting the
23 breeze with some inspectors, you know, how they felt
24 about it. Once again, it was an impression. So, we felt
25 that was something that had been an issue and was closed.

1 I believe most of the material traceability
2 issues were, in our opinion, closed. Once again, I am
3 relying on memory. That was something that had been a
4 problem. There had been some several non-conformances.
5 There had been corrective action. I believe there even
6 had been an NRC violation that had been closed.

7 I didn't know if that -- there were a lot of
8 open issues -- there may have been some open issues in
9 there, but there was also a lot of closed issues. They
10 just lumped them altogether.

11 I guess I considered instrument line
12 inadequacies in that group because there was an effort
13 under way to find out what, if any, problems they had in
14 instrumentation and go fix them. So, it was an issue
15 that, now, was being addressed. It wasn't something that
16 somebody wasn't doing anything about. The others were
17 laid out as things that it appeared as nobody was doing
18 anything about.

19 Q I see.

20 A At least, that was my impression that some
21 of them said, "Hey, here's a problem and they don't see
22 whether anybody has got a handle to it or even recognizes
23 it."

24 Q Thank you.

25 BY MR. ROBINSON:

1 Q Did you ever talk to Kermit Whitt, the at
2 that time director of NSRS, about what he felt out of
3 those perceptions were valid perceptions?

4 A I can't remember the specific nature of my
5 discussion with Kermit. I did have a discussion with him
6 just prior to talking to his people. I did want to meet
7 him, but I primarily just wanted to sit and talk to some
8 of the guys who wrote that so I could get an
9 understanding and talk to them. And I can't remember the
10 specifics of the discussion.

11 I believe my questioning of him was more
12 along the lines of, "How did you get to here?"

13 There were more management questions than
14 there were technical questions. Because by that time, I
15 already felt comfortable that the issues were issues.
16 And I was asking him how his organization had come to
17 that conclusion without, at least, raising the flag to
18 everybody to say, you know, "I need some help to see
19 if -- to check on me."

20 And I guess the knowledge of how that all
21 came about, maybe if it wasn't costing billions of
22 dollars, would have -- I would have thought was funny in
23 that it just appeared to be a mistake on the part of
24 everybody that were even in that fix.

25 It became, essentially, a flipping remark it

1 now became a TVA position. It happened. It's water over
2 the dam. And what do we do from here?

3 The subject of my discussion was more along
4 management lines.

5 Q Well, the reason I asked that is because he
6 would maintain, and has maintained recently, that at the
7 very minimum, corrective action and material traceability
8 which you indicated you thought was kind of a closed
9 item --

10 A Several of them were closed. There's a
11 whole bunch in that.

12 Q He thought if there was any two of those
13 items that he still would strongly maintain, even though
14 he's no longer a TVA employee, were significant problems
15 with QA would be the corrective action or the material
16 traceability situation.

17 So, I was just wondering if he reflected to
18 you any difference of opinion as to what his staff
19 presented as perception?

20 A No. He expressed a differing opinion on the
21 conclusion. We did talk, you know, the issues were
22 issues. The material traceability question, in my
23 opinion, the bulk of that question came from what I
24 considered to be improper interpretations of the
25 regulations and the codes.

1 Some of the statements in the backup to that
2 concern were flat out wrong. Admittedly, that tainted my
3 thinking on whether they had a valid concern. But, that
4 was my personal thinking.

5 I still sent out to the people and said,
6 "Tell me if there's some soft spots in that area."

7 Clearly, some of the reason for their
8 concern was, I feel very strongly, were
9 misinterpretations. In fact, in some of the other areas
10 there might have been some, too. That happened to be one
11 area where we had a different technical opinion on what
12 was required in some areas.

13 Q Okay.

14 A No, I didn't talk to him about the technical
15 issue, to speak of. I talked to the guys about them and
16 did those kinds of discussions. We had that discussion
17 where we differed, you know, in interpretations. In some
18 areas, we talked about where we agreed.

19 **BY MR. NOBTON:**

20 Q Mr. Lundin, earlier you mentioned that you
21 took the NSRS's bottom line about breakdown in the QA
22 program at Watts Bar to mean that there was a major part
23 of the program that wasn't being done any time, at all,
24 period.

25 A Essentially any time, yes.

1 Q Is that what you're definition of a
2 breakdown of a QA program would be?

3 A No.

4 Q What would it be? What would it take for
5 there to be a breakdown in a QA program?

6 A Well, it would -- there are several
7 different opportunities to do that sliced in different
8 directions.

9 Obviously, you know, an isolated breakdown
10 of a very highly safety significant nature, I would
11 consider a breakdown in the program because I build my
12 program to be more diligent in the areas where safety is
13 more significant. Or in a less significant breakdown, if
14 that happens regularly and it happens because I haven't
15 built a good program to make sure something happens, even
16 though, each problem I have might be small, I have them
17 recurring enough to say that my real fault is not in each
18 of these little problems. My real fault is having a
19 program that is inadequate.

20 So, those are two possible slices of where I
21 would consider a breakdown in my QA program. I, usually,
22 look for significance, you know, the significance of the
23 issues and how widespread it is. After that, it becomes
24 fairly subjective.

25 Q From the time you were familiar with TVA,

1 and I am including your document review and part of the
2 systematic analysis business up to the present time, has
3 there any time during that time period been a breakdown
4 of QA program at Watts Bar?

5 A Have we identified one or have we had one?

6 Q Have you had one?

7 A I don't know that we have had one during the
8 time that I have been involved.

9 Q Have you identified one?

10 A We have identified some, yes.

11 Q What are you referring to?

12 A I am referring to since I have been working
13 closely with the welding, obviously, the areas where we
14 have had the radiography. In fact, the two that are
15 right in my program are excellent examples of what I
16 said. We have the 741 level structural steel, and we had
17 the radiography film interpretation problem.

18 I think they are excellent examples because
19 your 741 is, if you really look at it, technically, it's
20 a small problem, but it shows a failure of every step in
21 your operation and your production control and inspection
22 and QA, you know, your whole QA program which includes
23 all of those things. It's an example where, apparently,
24 just about every step failed, or at least, was weak
25 enough to let somebody through.

1 The radiography is the opposite. It's only
2 one step in a whole chain of events in the production of
3 AMS weld, a pressure boundary weld. Yet, it's only one
4 little step of maybe 50 things that has to happen. It
5 was significant, because it had the potential to allow a
6 weld that is unsatisfactory to exist in a pressure
7 boundary.

8 So, the two that are in my program are two
9 totally different types of cases. They are both
10 significant, significant for different reasons, and they
11 are both breakdowns in the program, in my opinion.

12 Q Had those breakdowns been fully known at the
13 time of the March 20th letter had gone out, would you
14 have agreed with the letter?

15 A I would have to read it again, but probably.
16 Because I believe, you know, my understanding of the
17 letter is, we have got problems, you know, and we're
18 going to find out which ones and how bad they are.

19 And the fact that we had something
20 reportable under 5055E, as I have had many, many times
21 depending on the various thresholds that we dealt with,
22 you know, I don't automatically assume that I was not in
23 compliance with 10 CFR 50.

24 Q Have you ever seen a program, in your
25 experience, that wasn't in compliance with 10 CFR 50

1 Appendix B?

2 A Yes. I had some, you know, some elements of
3 a program that I believed did not meet the criteria.

4 Q I mean, a program that wasn't in compliance.

5 A I believe that the program is inadequate if
6 one element of it is, totally, inadequate because, then,
7 you have a gap. And what I am saying is if something to
8 implement one of 18 criteria is totally inadequate then,
9 in fact, your program is not what it should be.

10 Q If design control is totally inadequate.

11 A If design control was just, totally,
12 inadequate or if inspection was totally inadequate, I
13 believe that because they tend to have a series type
14 function.

15 Now, if they are weak, if you find them to
16 be weak you say, "This is weak. I bet it broke a couple
17 of times. I better go find out where it broke. I
18 haven't got an adequate program."

19 But, my experience tells me that a program
20 that is adequate and meets the requirements but maybe has
21 some things I consider to be weaknesses, I better go look
22 to make sure it didn't break on me somewhere. Some cases
23 it may have. Some cases maybe it didn't. The programs
24 to implement the radiographic interpretation were
25 perfectly acceptable.

1 Q But the carry through --

2 A The carry through --

3 Q Is that a manager problem, as you see it?

4 A I see it as a management problem. For
5 instance, it met the minimum requirements of our
6 regulations, but there was some practices that maybe
7 weren't good practices.

8 For instance, I don't tell a person how to
9 sweep a floor without going back to check to make sure,
10 at least, the first time that it was done the way I
11 taught them to, even though he was properly trained,
12 qualified and everything.

13 It is still that process. No matter what
14 activity you're supervising, there has to be that process
15 a little more at the beginning and less as you gain that
16 level of confidence. That normal supervisory process in
17 the radiographic film interpretation appeared to not be
18 there. That was just line supervision.

19 The guy was qualified properly. I am sure
20 he felt he was doing a good job. Nobody told him he
21 wasn't. He had regulators. He had third parties, and
22 nobody said anything.

23 The toughest guy has to be the first line
24 supervisor, and that didn't happen. And then, somebody
25 making sure that first line supervisor does that.

1 Because now, if I was the next step, I would expect that
2 my job would be to make sure that supervisor is
3 overseeing his people, technically, a little bit to make
4 sure he gains that confidence.

5 So, consequently, you had an individual who
6 made, maybe, twice as many mistakes as you would expect a
7 normal person to make, roughly. I'm not so sure that if
8 he was recalibrated after a short time of reading film,
9 after shown what the problems were, whether he would have
10 been just as good as anybody else.

11 So, there was a case where if you read any
12 one of those procedures, any one of the programs, met
13 everything, but the practices were -- and those are the
14 indicators I talked about, and those are the things I
15 looked for beyond having a basic program that meets the
16 criteria.

17 Q Wasn't this like a management oversight of
18 program implementation, also, present across the board in
19 the QA program at Watts Bai?

20 A What I am finding -- and this I didn't know,
21 then, but I am finding through more and more experience
22 with it that, no, I don't. I expected it to be, but I
23 found out that's not true.

24 Once again, it relied on the individual.
25 Some areas it worked well and some areas it did not work

1 well. And it relied very much on the diligence of the
2 individual supervisor to make sure that what was supposed
3 to happen happened. And some people did more than other
4 things. And some areas, you know, may very well have
5 worked just perfectly smooth. As I said earlier, a weak
6 program can come out just fine with good management.

7 BY MR. CRAIG:

8 Q Do you have examples in one of the areas
9 where it worked well?

10 A Not off the top of my head. I'm sure if I
11 sat and thought about it, there would be some area out
12 there that I felt a little more comfortable with than
13 others.

14 BY MR. WILLIAMSON:

15 Q I have a couple more questions about your
16 independent review since it, apparently, was used to form
17 the basis of the letter?

18 A It was a help.

19 Q Looking at a June 5th, 1986 letter to Mr.
20 Denton from Mr. White. It says, "Your letter of January
21 3rd, 1986 addressed and requested a response to a number
22 of specific perceptions which has been raised by TVA
23 NSRS.

24 In order to respond to that specific
25 request, I assembled a group of outside individuals, a

1 significant and extensive Nuclear QA expense in the areas
2 questioned, and conducted a review of each of these
3 perceptions."

4 Q Is this what you did?

5 A I don't know which guy I am in here. I
6 didn't write it.

7 Q I don't know either. I don't know if he's
8 talking about this systematic analysis, this group or --
9 and then later, he says, "In addition, I had a group of
10 highly experienced non TVA experts review this groups'
11 findings."

12 Q Now, who are you?

13 A To be very frank with you, I'm not sure by
14 that.

15 BY MR. NOBTON:

16 Q Have you ever seen this letter before?

17 A Obviously, I have seen the letter. I didn't
18 digest the letter. I wasn't involved in the production.

19 BY MR. WILLIAMSON:

20 Q I didn't know if the assembled group of
21 outside interest --

22 A I believe, and this is going by this, I
23 expect that I am the first group that conducted a review
24 of the perceptions. And the people reviewing this review
25 were the individuals upstairs.

1 Q That would have been?

2 A Which would have been the Wegners, Kelleys,
3 etceteras.

4 Q Okay. As you said, both today and I think
5 back on January the 5th when I sat in on an interview
6 with you, that it was somewhat of a snapshot approach --

7 A Yes.

8 Q -- to further review the NSRS's concerns,
9 and this had been either at your request or at Mr.
10 Kelley's request.

11 I think seven Stone Webster personnel was
12 used?

13 A Right.

14 Q And you looked for six days?

15 A It was 10. I usually say 10 people, but
16 it's 10 days, seven people.

17 Q January 31st to February 5th. I am looking
18 at your letter.

19 A All right.

20 Q And the reason I want to pursue this a
21 little bit is because, like I said, obviously, this
22 review had some impact on the March 20th letter decision
23 to exclude the comments?

24 A It's my understanding, even though I was not
25 involved in the production of the final production of

1 those letters, it's hard --

2 Q Without reading the entire contents of the
3 letter, during our discussion back on January the 6th you
4 indicated that these people did a document review,
5 interviewed some of the people who were handling the
6 NSRS's perceptions.

7 Did they review any hardware?

8 A Yes.

9 Q I mean, they, physically, did field
10 inspections?

11 A They, specifically, choose things and had
12 TVA inspect them with their oversight.

13 Q So, this was more than a shopshot? You
14 mentioned that it was -- you determined that you needed
15 maybe an in-depth review of this process?

16 A Well, an inspection process. To give you an
17 example, there was concern for the welding program
18 indeterminate, things like that.

19 One of my guys, as an example, went out
20 dragging an inspector -- and the independence thing is
21 very important because, you know, you're in a new
22 organization and you have got this guy with the question
23 of perception and the backup to it, and this guy has
24 built an answer and you say, "I don't believe either one
25 of them," I mean, right off the bat. That's why I say, I

1 have got to look, you know, I have got to get my own
2 perception.

3 And he said, "Okay. Inspect that hanger."

4 Then, use any paper, just walked out into
5 the plant and did this with two or three things, "Perform
6 an inspection."

7 It came up with some results, and there were
8 some deficiencies. They listed what they found. Then,
9 he said, "Just show where you have identified this in the
10 past and that it's documented somewhere, that this
11 doesn't look like exactly like the drawing and it's been
12 accepted."

13 That wasn't easy, but it happened in every
14 single case. It was -- that was why we said one of the
15 things I said, the document system is lousy, but it's
16 there. That's one of the things I said to the line
17 organization when I left.

18 I said, "You know, fellows, I'm not saying
19 you didn't have the data, but it took seven people three
20 days rummaging through everything you have got to get the
21 paper trail.

22 And when you were done, you got back to my
23 guy and gave him the story and showed him the paper and
24 where you got the paper."

25 And he said, "By God they did it." But, it

1 wasn't easy.

2 Q Was the results of your review compiled in a
3 report, a formal report?

4 A No. I wanted to get away from that, because
5 then, I was going to have another four inch stack of
6 documents.

7 So, I said, "Listen guys, we're going to go
8 out there," and I said, "Obviously, you're going to have
9 keep notes to keep track of what you're doing. I want
10 you to keep notes. And we are going to have daily exits,
11 in which case, you guys will talk to each other."

12 Because there was a lot of cross
13 organization. They helped each other in which direction
14 to go next and the various perception. Because somebody
15 said, "Hey, I heard today," and really just kind of got
16 right in the process.

17 I said, "Okay. Keep whatever notes you
18 need, but the intention is to give me a briefing. And I
19 will take my notes against each perception as to what
20 things ought to be done."

21 I said, "Anything you find outside of what
22 we're looking at, I want you to pass it on to the guys
23 right here that you're doing. If you see a deficiency,
24 if you see a problem, get it right into the process."

25 You know, like the document thing. We made

1 it a point to sit down with some of the guys for five or
2 ten minutes and say, "Listen, you have got all the stuff
3 we needed, but we really think you have got to take a
4 hard look at this because this is too long and too hard.

5 You have got to be able to come up with it
6 faster than that. There's no regulation, but the point
7 is, there is reason. And the problem is, we only had a
8 few things inspected, and you have got thousands of
9 things out there."

10 So, if you ever had to pull them and out --
11 and I am going through this, now. We had EG&G out there
12 for nine months doing inspections. And I firmly believe
13 that, you know, 50 percent of what we have found has been
14 reported before, but it's a level of effort to find it.

15 It's easier to just disposition it because
16 they're minor defects than it is to try to dig out the
17 paper. The level of efforts is much less.

18 So, we handled it that way. They did have
19 some notes. I took a few pages of notes off of what they
20 said, and then produced my letter from that. Because I
21 didn't want to put another big thing into the system. I
22 wanted this to be -- these guys were being my eyes and
23 ears. I wanted to be able to give some input to TVA
24 management that in my experience at all problem plants
25 and everything, what did I think.

1 And to do that in a short period of time, I
2 had to use people I knew and I knew their capabilities to
3 be my eyes and ears. And they were selected with Dick
4 Kelley, my company, and all these people are -- most of
5 them are under his wing. So, we could be very selective
6 and get them on a short term basis.

7 Q Did you keep your notes?

8 A For awhile. I was asked -- you guys asked
9 me that. After you guys talked to me in January, I
10 looked for those things, because there is several
11 possibilities. There's my Boston office. Because what
12 happened, every time somebody had a copy of everything, I
13 was putting it in a briefcase. Finally, I put that
14 briefcase aside and picked up another briefcase.

15 Finally, my son bought me a new briefcase.
16 So, I had a third briefcase going. And I purged a lot of
17 that stuff. I really didn't think I would throw those
18 away, but I may have.

19 Back in the Summer, I thought 10 CRF 50 was
20 a mute point by that time. I really thought that was
21 behind us. I may have purged it. I had no reason to.
22 That would have been something I would have slipped in a
23 folder somewhere.

24 I went through my Boston office. I looked
25 at the stuff at home. I was pigeon holing stuff in a

1 trailer up here at Watts Bar at the time. I even went
2 back there in case I didn't empty the desk. I can't find
3 it. I haven't seen it in months.

4 Yes, I had several pages of stuff, you know,
5 pluses, minuses, impressions that I wrote down that I
6 kind of re-reviewed. I even made a few phone calls back
7 to the guys to clarify something for me and ask a
8 specific question before I wrote that two page
9 memorandum.

10 Q Is this letter a result of your notes?

11 A That's a result of that. I felt I should,
12 you know, just -- because really what it is, they asked
13 me for my impression, and I didn't want to give them a
14 report. I wanted to give them my impression.

15 Q And is a six day review with seven people
16 sufficient time to provide enough input to you for you to
17 give your impression?

18 A For my impressions, those guys worked, you
19 know, 10 to 12 hours a day. They, because of the
20 pressure that was on, I got TVA management to pave the
21 way to whatever cooperation we needed, whoever we needed
22 came running and got what we wanted. I think the
23 intensity of it was pretty good.

24 Q That was sent to Mr. Mason. Did anyone else
25 get a copy of it or did you discuss your findings, the

1 results of your review with anyone else in any detail
2 that you can recall?

3 A Yes. When I presented that memo, it
4 included a briefing. And the people available, then,
5 there was only three or four people. Mr. Mason was one
6 of them. Bob Mullin was another.

7 I don't know whether Dick Kelley was there
8 or not. I think somebody from his organization was
9 there, but I don't think Dick Kelley, himself, was there.
10 I think it was somebody from licensing, because they had
11 been tasked to write the letter at that time, anyway.
12 I'm not sure. I don't know who else, but it was like
13 three other people besides myself in Mr. Mason's office
14 for about 15 minutes to a half an hour.

15 BY MR. ROBINSON:

16 Q Not Mr. White or Mr. Wegner?

17 A Absolutely not, never spoke to them at all.

18 Q Mr. Kelley?

19 A I discussed it separately with Mr. Kelley.
20 He was not in that briefing. But as you know, I talked
21 to him on a regular basis.

22 So, obviously he didn't need a special
23 briefing. I worked for him. Consequently, between
24 Boston and here would bump into him on a regular basis.
25 So, that was a more casual feedback type of a situation.

1 BY MR. WILLIAMSON:

2 Q Mr. Nace?

3 A I don't know whether Larry was in that
4 meeting or not, to be very frank with you. He may have
5 been. Like I said, three or four people. It occurred --
6 the problem is it occurred on a Friday afternoon, and a
7 lot of people were catching planes, I think, is what it
8 was.

9 Q One more thing. You did your review in six
10 days and concluded that no activities were noted nor
11 information received would be considered to be a
12 non-compliance with 10 CFR 50 Appendix B.

13 It took three months for TVA to respond to
14 the NRC request. Why the difference? Why so long to
15 respond to the request as to whether you are in
16 compliance with Appendix B?

17 A First of all, this is my personal opinion.
18 The bureaucracy of getting a letter out of the TVA
19 organization is very difficult, is very difficult. That
20 was something that certainly was not streamlined when
21 Steve White came aboard, because the amount of advisors
22 and so forth and the review process became very tedious.

23 It's my personal opinion, based on not just
24 the time of that letter, but on the time of letters I
25 have tried to get out of TVA, I have managed to

1 successfully do it only because I am a real pain in the
2 neck. But, I know there is other people who have spent
3 months trying to get a letter out because they didn't --
4 the process could be slow.

5 That was one of the areas that was concerned
6 in the responsiveness. And it was something that
7 bothered me that here we were being non-responsive.

8 My advise, however, was not the right advise
9 to follow, because I would have answered it very rapidly.
10 But, the answer would have been inflammatory because I
11 would have, as I said earlier in this discussion, I would
12 have taken it as being, "Well, obviously, you're not
13 serious, now. Aren't we going to talk about this later
14 on after I turn over some rocks?"

15 It turns out, politically, that wasn't the
16 right answer. So, then, I do know in February there was
17 some concerns, is it really an issue?

18 My experience with regulators -- and once
19 again, we weren't communicating at the working level, as
20 I think we should have. I asked the question, "Are they
21 sitting drumming their fingers waiting on that answer,"
22 or are they sitting back saying, "Well, obviously, we're
23 not going to get an answer for awhile because of what's
24 going on?"

25 So, there was some piece of intelligence, in

1 my opinion, that was missing. I mean, if they are
2 drumming their fingers waiting for an answer; answer. If
3 they're are not, then, let's wait until we can really
4 take and put something on a solid foundation, make a
5 stand. So, we end up somewhere in between.

6 By the time that letter went out, there was
7 a tremendous pressure to get it out. But, I don't
8 believe our activities through January and February were
9 as pointed towards getting that letter out as we were
10 towards looking into the NSRS's concerns.

11 I, generally, think that it was like, "Well,
12 obviously, we can't answer that letter right away without
13 too many caveats, let's go look."

14 And then, we found out, "No, you have got to
15 answer the letter."

16 So, obviously, the letter goes out with some
17 caveats. It was a very frustrating experience for me
18 because I believed it was, and I still do believe it was,
19 a non-issue, should have been a non-issue. We should
20 have been with our feet held to the fire on finding th
21 problems and fixing them.

22 BY MR. ROBINSON:

23 Q Did you keep a copy or do we have a copy of
24 your original draft letter?

25 A I am sure I didn't keep a copy. Whether

1 it's in your stacks of information that was sent in the
2 backup, I don't know. I think it was only one page, and
3 maybe even a little over a page, doubled space. It was
4 much briefer, I thought responsive, but that letter was
5 written by 50 people.

6 BY MR. NOBTON:

7 Q What did your letter say?

8 A It was more earlier on, it really said,
9 "Hey, we understand there's a potential for" -- not in
10 these terms, obviously.

11 "We understand there's a potential for
12 having been some failures. That's why we are
13 re-organizing. That's why we're doing all the things we
14 need to do. And if there's any failures out there, we
15 believe we have established a program to find them and
16 fix them."

17 And I believed that I tried to close it by
18 putting the armor on the regularities. "We expect you to
19 watch me. So, yes we want you to be right on top of is
20 in this respect."

21 It would have been, like I say, it would be
22 the quick answer, if you will. We didn't say anything,
23 in all frankness, except, "Yes, I am looking to see
24 whether I have got that problem. And it's going to take
25 me a while to see how bad the problem is, if it's there."

1 Because what you get is, you get a
2 conclusion that's masked by the issues. You look and you
3 say, "Gee, I have got a whole lot of things nipping me at
4 the heels."

5 It would be masked in a problem or it could
6 be making it look like I have got a problem that I really
7 don't have. You know in hindsight now, obviously, a lot
8 of the adventures we have taken off on looking back
9 saying, "We have overreacted, significantly, to some of
10 these."

11 Because you always take that chance. A
12 problem plant always overreacts. And the end product is
13 you might have overreacted, but you did find your real
14 problem.

15 BY MR. MORPHY:

16 Q When we talked with you on the 6th of
17 January, you indicated to us that, as a result of that
18 study that your group did, it wasn't all that clear cut?

19 I mean, you know, it wasn't like "I feel
20 real good about everything?"

21 I mean, it was -- when you said that you
22 didn't find any areas of non-compliance, I think you said
23 that it was a close call in a lot of areas; is that
24 correct?

25 A Yes. But that final statement came from the

1 fact that if I could make a statement like that, I had
2 to, specifically, ask the question of the individuals who
3 did the work.

4 And that question was asked, essentially, in
5 that fashion to each individual by me. Because,
6 obviously, my briefings were, "Gee, this is lousy.
7 That's not a problem, but gee this is that and I don't
8 like this."

9 There were problem areas. There were areas
10 of weakness. There were things like, "Well, they seem to
11 be on top of that problem, but I think I would look into
12 this over here if I was, you know, I would look into like
13 records."

14 You know, that was an excellent -- I believe
15 that, you know, they have the inspection records more
16 than what the NSRS perception believes. But what I
17 believe is that perception comes from the fact that it's
18 so hard to find and we ought to look into how the
19 records, you know, are being identified and kept and
20 tracked so they can be more easily traced.

21 Q I mean, but you didn't come away from that
22 survey saying that "Everything is just fine" after the
23 review of that?

24 A Oh, no.

25 Q You didn't have a real good feeling about

1 how. TVA was functioning?

2 A No, I believed that we had some things that
3 really needed changing. When I say "Weaknesses," you
4 know, once again, you can have procedures that meet the
5 requirements, but it's how that is put together and
6 implemented.

7 And there was things in the implementation
8 that made me glad we were doing these, that we were
9 attacking the organization and management and how line
10 authority was implemented.

11 Q I realize that the letter written, the June
12 5th letter, you didn't have any input into that?

13 A Obviously, some of what I did was used as
14 input. I, personally, wasn't involved in the process.

15 Q Was it your intention when you did your
16 review that it would be used down the road as to what has
17 been characterized as an independent review?

18 I mean, we have talked about this earlier,
19 and I don't think you said that it was your intention,
20 originally, this it was a basis that was going to be used
21 as an independent review.

22 Was that your idea up front?

23 A Up front I thought it was an independent
24 opinion, which included a review to form that opinion.
25 That might be playing with words, but I think you know

1 what I am saying.

2 Q But for whose use? Didn't you say,
3 originally, it was developed for you so you could get a
4 feel about the perceptions?

5 A Right. So, the review was really done by
6 me. I did the review utilizing those people. And I have
7 no problem of what my conclusions at that point in time
8 were. 20 years from now you can look at that, and I will
9 stand by it. Whether it's characterized as an
10 independent review, I didn't have any feelings one way or
11 the other on it.

12 Q Did you view that -- did you know that this
13 information was going to be given to Mr. White and that
14 this would be one of the basis for him arriving at --

15 A It was my understanding that my results of
16 the review would be passed on to Mr. White and his staff,
17 and certainly made a part of what they would review to
18 make their decision on where they stood.

19 I always expected it was for purposes of
20 being another log on that fire for a manager to make a
21 decision. This is something to consider. I always felt
22 that way.

23 Once again, at that point in time within the
24 bounds of what I did and the level of effort we were able
25 to expend in a short period of time, yes, I always

1 expected that.

2 **BY MR. NOBTON:**

3 Q Earlier you were mentioning that this
4 independent effort was conducted in response that you
5 were asked for your impressions of the NSRS's
6 perceptions.

7 Would the level of effort have been the same
8 if someone had asked you to conduct an analysis and come
9 to a formal conclusion?

10 A That would have been different, yes.

11 Q How much different?

12 In other words, I am asking where on the
13 scale? Was this 20 percent? 50 percent? 80 percent of
14 a formal effort?

15 A Well, more 20 than -- you know, in other
16 words, it was -- I think that if I was asked to perform
17 an analysis, the first thing I would have done would have
18 been to draw up some sort of guidelines and approach some
19 sort of a check list.

20 Q An ordered plan or inspection plan?

21 A I hate to use those terms, but some
22 management plan for gaining the information we needed to
23 make the decision. And it would then -- and I would
24 expect it, then, to be in a report form with, you know,
25 executive summaries and conclusions and attach all the

1 information of the data that came to those conclusions.

2 And I would have expected it to take a
3 certain amount longer, you know, the same type of people,
4 probably the same amount of people maybe, you know, for
5 some longer period of time, plus the documentation to
6 that analysis.

7 BY MR. MURPHY:

8 Q But this wasn't intended to determine
9 whether you were in compliance with Appendix B?

10 It wasn't in-depth enough, you said, to tell
11 whether you were compliance with Appendix B?

12 A In my opinion, it wasn't in-depth enough to
13 determine overall compliance with, you know, Appendix B,
14 only to say, does it appear as though efforts in all of
15 the areas are being made to comply with Appendix B and do
16 we see some results of those efforts?

17 One was to see the intent and the program,
18 and the other was, then, go look for the product to make
19 sure, in fact, it's happening.

20 Q Was there any discussions within TVA of the
21 consequences of saying in that letter, "We are not in
22 compliance with Appendix B"?

23 A Repeat that.

24 Q Was there any discussions among the staff
25 members that you attended, formal or informal, under

1 which the consequences of TVA saying, "We are not in
2 compliance with Appendix B" was discussed?

3 A Oh, yes. I discussed informally with
4 everybody you want to talk about. That was an issue. I
5 mean, one of my recommendations was, "Tell them you're
6 not."

7 It was kind -- it was just as easy to say
8 you were not. You know, that's why I say, we should have
9 gained some intelligence as to what the guy on the other
10 side of the fence was thinking?

11 I mean, out of frustration a couple of
12 times, I said, "Tell them you're not. Tell them, yes,
13 you're right."

14 What changes our action?

15 Our action becomes exactly what we're doing.
16 In other words, what we were doing didn't change whether
17 we were in compliance or non-compliance.

18 And several times I considered and bounced
19 off of people, "What do you say we just tell them that
20 were not in compliance?"

21 Q What was their response?

22 A Some people said, "Yes, that's worth a
23 consideration."

24 Once again, they were all informal
25 discussions. Never in a Steve White level or anything

1 like that. But, you know, that was battered around by
2 me.

3 Because, once again, as I told you earlier,
4 I believed it to be a mute point, and all the actions
5 were being taken as if you weren't in compliance. So,
6 what's the harm in saying, "No?"

7 The harm in saying "No" in my opinion or the
8 danger in saying "No" I should say, is the impression
9 that it gives those outside the regulator. When it was
10 obvious to me that the issue was not a TVA regulator
11 issue but an issue that was going to be, you know, in
12 Congress and in the press, the misunderstanding of that
13 statement, the potential misunderstanding was huge. And
14 it was probably imprudent to do so for that reason, not
15 that it would have changed the action.

16 So, I generally came to that conclusion
17 myself as saying, you know, you wanted to say that just
18 get it over with but felt you couldn't because you
19 weren't just talking to your regulator. I'm not used to
20 NRC saying to me, "Are you in compliance"?

21 I am normally used to the NRC saying, you
22 know, "Here's a case where you didn't comply. Tell me
23 what you're going to do about it."

24 So, it's seldom that I am asked, other than
25 in the general case of saying, "Yes, I am complying with

1 10 CFR 50 Appendix B."

2 The NRC relationship was not a normal
3 relationship to me, and that even went on for awhile.
4 And only recently have I seen, what I considered, a
5 normal correspondence. So, we weren't in a normal arena.

6 And the last time I made that recommendation
7 was several months later. And at that time out of
8 frustration and half kiddingly, I grabbed Dick Kelley and
9 said, "What do you say we just tell them we're not?"

10 It was frustration at that point in time.

11 Q Could you have made a case for not being in
12 compliance?

13 A Oh, I could go and make a case for saying it
14 wasn't in compliance, I am sure. I would have to go back
15 and get some facts. But once again compliance is a
16 stripe. It's not a line. When you're in that stripe,
17 you know, I have enough experience with it to work it
18 either way, I am sure.

19 Q Let me ask you another question. Was it
20 ever suggested in any meetings that you attended that
21 what we're going to do in this letter is come as close to
22 saying "We're not in compliance without saying so?"

23 Have you ever heard that idea?

24 A No, never, no. The only discussions I ever
25 had was very clear that we were looking for the, you

1 know, point us in a direction.

2 If I had come back and my impression was,
3 "Gee, guys, I don't think you're complying," I feel very
4 strongly that would have influenced that letter
5 differently.

6 Q You think they would have said that you were
7 not in compliance?

8 A I think so. Not that the letter was hinging
9 on what I said, specifically, but I think that, you know,
10 it would have made a lot of people take a lot harder look
11 before the letter went out. And I believed that, you
12 know, I was not given any implication.

13 And I had none, personally, being an
14 outsider and being a QA professional in this business, it
15 did nothing for me to do anything but what I actually
16 felt. I have never steered it in one direction or
17 another and had no intention of doing that.

18 Certainly, if there was any suggestion, I
19 wouldn't have done it. If there was any suggestion of
20 going in one direction or another, I would have refused
21 to do it. It's just as simple as that, and I would have
22 been backed up by Dick Kelley.

23 Q Was the topic of a material false statement
24 discussed in any meetings you attended in preparation of
25 the letter?

1 A I didn't attend many meetings with letters,
2 but I had discussions. Certainly, every time the letter
3 was discussed, someone always pointed out that we have
4 got to make sure we don't say anything that could be
5 considered a material false statement. I have always
6 been aware of that.

7 I believe the sensitivity level was very
8 high for that, but I believed that the sensitivity level
9 was only high because they felt that somebody was on the
10 other side of the fence waiting to pounce on it, looking
11 for it. That's where I believed that came from, from my
12 experience in it.

13 Q Some of the ideas that overall compliance
14 and no pervasive breakdown, do you know whose idea that
15 was, the using of that terminology?

16 A I don't know if I could even say. You know,
17 who dreamed up any specific words, what the right words
18 were to use, I can't say who that was.

19 Q Are those words very common in the QA field?
20 In the past correspondence, have you used those words in
21 correspondence that you have drafted in response to NRC?

22 A Possibly. As I have mentioned, this was not
23 a typical piece of correspondence. I'm not usually the
24 guy having to say. I am usually the guy being told that
25 I am in compliance except for here and here and here.

1 And I am coming back and telling them what I am doing
2 about those areas that I am considered to be in
3 non-compliance as opposed to being asked, "Am I in
4 compliance with Appendix B?"

5 Normally, we present a program that says
6 "We're going to comply with Appendix B." And then, we go
7 forth and implement that program and really get into this
8 kind of a discussion where we're asked to redefend that,
9 except on a case by case basis. It's certainly possible
10 I could have used those terms.

11 Q What does the word "Pervasive" mean to you?

12 A It's difficult to describe. Pervasive means
13 widespread, you know, deep and widespread, I guess, I
14 would in my own mind --

15 Q Would "Pervasive" mean to you that we have a
16 total breakdown in each and every one of the 18 criteria?

17 A No, not necessarily. I mean, that would be
18 pervasive, yes.

19 Q I understand that, but would that --

20 A Are you saying that is the only thing I
21 would consider to be pervasive?

22 Q Yes.

23 A No. Something could be considered, in my
24 mind, pervasive. I believe I gave examples earlier of
25 different kinds of slices where something could be

1 pervasive but minor or where something else could be, you
2 know, a very narrow slice but pervasive because of its
3 depth.

4 Q But certainly, in your view, it doesn't
5 require a 100 percent of every --

6 A No. It's a case by case basis, and does not
7 specifically require 100 percent breakdown.

8 Q I don't have anything else.

9 BY MR. NORTON:

10 Q What did Mr. Kelley say when you last
11 mentioned to him the suggestion, "Why don't we just go
12 ahead and say we're not in compliance"?

13 A It was very informal, and he pretty much
14 agreed, or at least commensurated, at least, the
15 frustration and said because -- by this time, now, we had
16 started to see, as a result of our program, some
17 problems. We didn't know the extent of them, yet, but at
18 least you had more evidence to say you were in
19 non-compliance.

20 You know, I feel very strongly on my
21 interpretation of 10 CFR 50, but I was ready to throw out
22 my interpretations just for expediency on the
23 conservative side. We had breakdowns. We ended up
24 reporting those in the welding area.

25 Q Right.

1 A And was willing to say that, "Yes, I wasn't
2 in compliance with 10 CFR 50 because I had one
3 breakdown," even though that's, professionally, not the
4 way I felt, but I was willing to do it politically.

5 Q Did anybody go so far as to actually write a
6 negative draft?

7 A Not that I am aware of. I certainly didn't,
8 and I don't know of any or have never heard of any. No,
9 not that I am aware of.

10 BY MR. MORPHY:

11 Q A couple of final questions.

12 A No problem.

13 Q First off. We would like to thank you for
14 taking time out of your busy schedule to come and talk
15 with us for a few hours.

16 Mr. Lundin, have I or any other NRC
17 representative threatened you in any manner or offered
18 you any reward in return for this statements?

19 A No, sir.

20 Q Have you given this freely and voluntarily?

21 A Yes, sir.

22 Q Is there any additional information you
23 would like to add to the record?

24 A None.

25 Q The time is 3:55, and this is interview is

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

concluded.

END OF STATEMENT

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:

AN INVESTIGATIVE INTERVIEW OF: CRAIG D. LUNDIN

DOCKET NO:

**PLACE: LOOKOUT PLACE
CHATTANOOGA, TENNESSEE 37401**

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) *K. J. Nixon*
(Typed) K. J. NIXON

Official Reporter

Reporter's Affiliation

**SMITH REPORTING AGENCY
POST OFFICE BOX 6127
CHATTANOOGA, TENNESSEE 37401**