

EXHIBIT 21

Case No. 2-1998-023

Information in this record was deleted
in accordance with the Freedom of Information
Act, exemptions b7c
FOIA- 2001-0012

K/13

EXHIBIT 21

EX 7C

UNITED STATES OF AMERICA
 NUCLEAR REGULATORY COMMISSION

- - - - -X

In the Matter of: :

INTERVIEW OF :

DELSA FRAZIER :

(CLOSED) :

- - - - -X

Tennessee Valley Authority

1101 Market Street

Chattanooga, Tennessee

Wednesday, March 10, 1999

The above-entitled matter came on for interview,
 pursuant to notice.

BEFORE:

GARY CLAXTON, Investigator

APPEARANCES:

On Behalf of the Interviewee and TVA:

THOMAS FINE, Esquire

Office of the General Counsel

Tennessee Valley Authority

1101 Market Street

Chattanooga, Tennessee

EXHIBIT 21
 PAGE 1 OF 41 PAGE(S)

ANN RILEY & ASSOCIATES, LTD.
 Court Reporters
 1025 Connecticut Avenue, NW, Suite 1014
 Washington, D.C. 20036
 (202) 842-0034

2-1998-023

C O N T E N T S

WITNESS

EXAMINATION

DELSA FRAZIER

BY MR. CLAXTON AND MR. FINE

4

E X H I B I T S

NUMBER

IDENTIFIED

[NONE.]

ANN RILEY & ASSOCIATES, LTD.

Court Reporters

1025 Connecticut Avenue, NW, Suite 1014

Washington, D.C. 20036

(202) 842-0034

P R O C E E D I N G S

MR. CLAXTON: For the record, today is March 10th, 1999 and this is an interview of Delsa Frazier.

This interview is being conducted at the TVA Offices located at 1101 Market Street in Chattanooga, Tennessee.

Present at the interview is Ms. Frazier, and also present is Mr. Tom Fine.

Mr. Fine, at this point if you would identify yourself and give the purpose for your being here.

MR. FINE: My name is Thomas Fine, I am Assistant General Counsel in the Office of the General Counsel, the Tennessee Valley Authority, and I am here representing TVA and Ms. Frazier for the purposes of this interview.

MR. CLAXTON: Ms. Frazier, have you been introduced to Mr. Fine, and are you aware of his official identify?

MS. FRAZIER: Yes, I am.

MR. CLAXTON: Okay. And does he have your permission to be here today?

MS. FRAZIER: Yes, he does.

MR. CLAXTON: Do you understand that everything you say can be reported back to your attorney through Mr. Fine?

MS. FRAZIER: Yes.

ANN RILEY & ASSOCIATES, LTD.
Court Reporters
1025 Connecticut Avenue, NW, Suite 1014
Washington, D.C. 20036
(202) 842-0034

1 MR. CLAXTON: And that he also represents your
2 employer?

3 MS. FRAZIER: Yes.

4 MR. CLAXTON: Okay. Do you have an objections to
5 providing this information under oath?

6 MS. FRAZIER: No.

7 MR. CLAXTON: Okay. Would you raise your right
8 hand, please?

9 Whereupon,

10 DELSA FRAZIER,
11 the interviewee, was called for examination and, having been
12 first duly sworn, was examined and testified as follows:

13 DIRECT EXAMINATION

14 BY MR. CLAXTON:

15 Q Would you give us your full name, and if you would
16 spell it, please?

17 A Delsa, D-e-l-s-a, middle initial L., Frazier,
18 F-r-a-z-i-e-r.

19 Q Okay. And where are you currently employed, Ms.
20 Frazier?

21 A With TVA.

22 Q And at which facility?

23 A I am employed in the Office of Fossil and Hydro
24 Power, Central Laboratories.

25 Q Also, I failed to ask you, and if you don't mind

1 providing your home address and telephone number?

2 A [REDACTED] 7C

3 [REDACTED]
4 [REDACTED]
5 Q And, I'm sorry, you said you were employed at
6 which facility?

7 A Central Laboratories.

8 Q And that is located where?

9 A In Chattanooga, Tennessee.

10 Q How long have you been employed there?

11 A Seventeen years.

12 Q Okay. And what is your present occupation there?

13 A I am a metallurgical engineer.

14 Q And how long have you been a metallurgical
15 engineer for TVA?

16 A Seventeen years.

17 Q All 17 years. Okay. Do you have any professional
18 -- do you a degree?

19 A Yes, I do.

20 Q And what is that degree in?

21 A I have a bachelor of science degree in
22 metallurgical engineering.

23 Q And where did you receive that degree from?

24 A The University of Alabama.

25 Q Who is your supervisor?

1 A Richard Grau.

2 Q Do you know how to spell -- I mean, can you spell
3 his last name for me?

4 A G-r-a-u.

5 Q And do you know his title?

6 A Manager of analytical and evaluation services,
7 Central Laboratories.

8 Q And do you supervise any employees?

9 A Yes, I do.

10 Q Okay. How many employees do you supervise?

11 A Five and a secretary.

12 Q Okay. Generally, what are your responsibilities?

13 A My responsibilities are to schedule work, make
14 sure work is flowing, jobs are completed. I review those
15 jobs and approve work schedules, leave and reports.

16 Q Okay. Generally, administrative, supervisory type
17 work?

18 A Right.

19 Q But you do review technical reports?

20 A Right.

21 Q Okay. Prior to the interview we talked about the
22 purpose of this interview and I think we talked a little bit
23 about the report of an ice screw issue that took place back
24 in 1995, and I think through other documents, through
25 previous testimony you have given us, I have come to learn

1 that you were involved with a report regarding some ice
2 basket screws that were taken from Watts Bar Nuclear Plant.

3 A Yes.

4 Q Okay. Are you generally familiar with that --

5 A Yes.

6 Q -- report, that request for a report? Did you
7 receive that request for a report?

8 A The request for work, yes, I received that.

9 Q Okay. Who did you receive that request from?

10 A Vonda Sissom.

11 Q Okay. And who is Ms. -- is that S-i-s-s-o-m?

12 A Yes.

13 Q Okay. And who is Ms. Sissom?

14 A She was a metallurgical engineer at Watts Bar.

15 Q What was the purpose of this work request that you
16 had received, or what was the nature of it, that you recall?

17 A To determine the failure mechanism of the screws.
18 There were several that were fractured.

19 Q And what did you then do with that request?

20 A I passed that request along to Darrell Smith to
21 perform the work.

22 Q Okay. Who is Darrell Smith?

23 A He is a metallurgical engineer at Central
24 Laboratories.

25 Q All right. Did you discuss the work request with

1 Ms. Sissom at all as far as what she wanted or what was
2 needed in this examination?

3 A I don't recall. I don't recall doing that.

4 Q Okay. Would you normally discuss the nature of
5 the request, or would you ask any additional questions or
6 try to fill in any information that you felt was -- might be
7 missing? Or let me put it this way, do you normally review
8 the work request with, I think you refer to it as the
9 customer? Is that clear?

10 A That is clear. On occasion, I do. If the work
11 request isn't clear, I will, or if there are dates that just
12 don't seem to jibe with our schedule to where we can't
13 perform it in that reasonable period of time, then I go back
14 to the customer and ask them -- and try to negotiate times
15 and get a better understanding as to what they want.

16 Q Do you recall whether you had any questions about
17 this work request?

18 A No, I don't.

19 Q Regarding the ice basket screws?

20 A I don't recall.

21 Q And as a result of this work request, was a report
22 produced?

23 A Yes.

24 Q Okay. And did that report come back through you
25 for approval or --

1 A Yes.

2 Q Okay. And did you approve that report?

3 A Yes.

4 Q And I think later -- well, I will let you tell me
5 what -- did you forward that report on to Ms. Sissom?

6 A Yes.

7 Q Okay. And did -- what happened then, after the
8 initial report? Now, even though you and I probably know
9 which report we are referring to, just for the record, we
10 are -- I am referring to document number 4, and this is a
11 report dated June 2nd, 1995. And I apologize, this is a
12 fairly marked up copy. But do you recognize that as being
13 the report that was initially produced by Darrell Smith?

14 A Yes.

15 Q Okay. And did that report come back to you for
16 some type of correction or revision?

17 A What do you mean come back to me?

18 Q I'm sorry. After you passed it on to Ms. Sissom.
19 Do you do that by hand or through inter-office mail?

20 A Through the inter-office mail.

21 Q Okay. Did you receive a request to revise the
22 report in any way?

23 A Well, I received a request to explain the report.

24 Q Okay. Who asked you, or who request that from
25 you?

1 A Terry Woods.

2 Q Did he telephone you or have you in his office, or
3 was this a general meeting with other people? How did --
4 what was the nature of that request?

5 A He came out to the lab with a request for us to
6 just look at it, and he asked some questions and so we went
7 over it.

8 Q Do you recall what the nature of his request was?
9 Was there any one major issue that he -- was he asking you
10 to revise it or was he asking you to explain it? I think
11 you said he wanted you to explain?

12 A He wanted me to explain it.

13 Q Okay. And do you recall what he asked you to
14 explain?

15 A Well, there were a couple of points about thermal
16 cycling and some of the introductory statements of the ice
17 condenser cycling cooled, then warm, between 15 degrees and
18 room temperature, and some of those statements.

19 Q Now, from looking at this copy of the report that
20 I have, was -- did this request involve the examination of
21 some new screws, new ice basket screws?

22 A Yes, there were some new screws in that batch of
23 screws.

24 Q From that report, am I correct in understanding
25 that that would be set B?

1 A Uh-huh.

2 Q Okay. And for the court reporter's benefit, that
3 is set B as in boy. Did you understand where those screws
4 had come from?

5 A No.

6 Q Did you understand they were unused?

7 A Yes.

8 Q Do you recall what your finding was? And when
9 yours, I mean Central Lab findings. Do you recall from
10 memory what the finding was, or do you need to refresh your
11 memory by looking at the report regarding the new screws?

12 A Okay. As best I can recall, that there is a crack
13 that was discovered in one of the set B screws that we
14 looked at, and, basically, some of the others. I think it
15 was somewhat softer in hardness and had a lower carbon
16 content.

17 Q Now, this is in the new screws?

18 A Right.

19 Q Lower carbon content than what?

20 A The screws that had been in service.

21 Q Did you measure these screws against a standard of
22 some sort, did you have -- is there a standard that these
23 screws have to meet that you can determine that they either
24 did or did not meet the requirements?

25 A We were told that these screws were -- or should

1 be similar to ANSI Spec. 10.22 material.

2 Q Okay. And ANSI is that acronym, ANSI?

3 A For American Institute of Standards, I can't
4 remember what the standard is.

5 Q Okay. But it is an acronym.

6 A Right.

7 Q ANSI?

8 A Uh-huh.

9 Q And that was which standard, which number ANSI?

10 A 10.22.

11 Q 10.22. And what does that standard generally
12 state? Does that call for the type of composition, or do
13 you know what that relates to?

14 A Right. Basically, the chemical composition.
15 Basically, it should be a -- the 10 stands for plain carbon
16 steel with no alloy and elements and 22 stands for an
17 approximate or average of particle content.

18 Q On that report, can you tell me how many new
19 screws you received for examination?

20 A What is listed on the report, 12.

21 Q Okay. And I think you said one of the screws
22 exhibited a crack in it?

23 A Right.

24 Q Okay. In the first report dated June 2nd, 1995,
25 did you make any conclusions as to why that one new screw

1 had a crack in it?

2 A I don't think there were any conclusions drawn on
3 it, except the B screw -- I mean screw as far as why the
4 crack occurred.

5 Q Did -- and I am sorry if I didn't catch it
6 earlier. Did the examination of those screws indicate that
7 they did or did not meet ANSI standards? Do you recall, to
8 the best of your recollection?

9 A Okay. The screws had been cauterized and they
10 were case hardened and, based on that examination, they
11 would exhibit a higher carbon content, because we took the
12 whole screw and analyzed it, so, therefore, we are taking
13 into account the case hardening part as well, so it would
14 exhibit a somewhat higher carbon content. But we concluded
15 all that in this report by saying that some of them are
16 normally -- that the case hardening would explain why some
17 of the screws had a higher carbon content than what the
18 spec. called for.

19 Q Okay. Now, when you tell me that, are you
20 referring just to the new screws when you --

21 A No, I am referring to all of them.

22 Q Okay. Now, for the purposes of us, for the time
23 being, let's just refer to the new screws. Any question I
24 ask you, I would like to refer just to the new screws,
25 unless I define it more narrowly to include some of the old

1 screws, and I don't think we will, because we are really
2 concerned about the new screws and what you found there.
3 Can you tell from that report whether or not the new screws
4 met ANSI standards?

5 A This is missing a table, it had a table.

6 Q Okay. Yeah. Do you have a complete set? I
7 apologize again, but this was just a -- actually, I guess
8 this just has the narrative that we were provided.

9 MR. CLAXTON: And we will stop the tape while she
10 finds her report.

11 [Recess.]

12 MR. CLAXTON: We are back on the record again with
13 the same parties present.

14 BY MR. CLAXTON:

15 Q Ms. Frazier, think you were looking for some
16 tables to respond to my question as to whether or not the
17 new screws met ANSI standards. What did you find there, or
18 what does your report show?

19 A The report shows that they do meet 10.22 based on
20 carbon content, because the carbon content here is .22, and
21 if my memory recalls, having looked at these so many times,
22 the spec. calls for .18 to .23.

23 Q Now, this table that you are referring to is in
24 the report of June 2nd, 1995?

25 A Yes.

1 Q Okay. That is not the revised report?

2 A No.

3 Q That is in the first report?

4 A Yes.

5 MR. FINE: And just for the record, it is
6 denominated Table Roman II, Report of Chemical Composition
7 Analysis, parenthesis, (1 percent), close parenthesis, by
8 Induction Furnace Combustion Techniques, Report Number
9 95-1021.

10 BY MR. CLAXTON:

11 Q All right. Now, is that same table included in
12 the report of June 19th, 1995, the subsequent report?

13 A Yes.

14 Q So, if I hear you correctly, the table that was
15 included in the June 2nd report basically found that those
16 new screws met ANSI standards for chemical composition?

17 A Based on the carbon content, yes.

18 Q Okay. And that same table was also included in
19 the subsequent report of June 19th?

20 A Right.

21 Q Okay. Now, I believe you said that one screw of
22 set B, the new screws, exhibited a crack?

23 A Uh-huh.

24 Q Would you normally get some sense of whether or
25 not a condition like that would be abnormal? In other

1 words, when you see a report -- and not knowing what your
2 experience is, or how often you examine screws, I am not
3 real sure how to ask the question, but I guess a simple way
4 to put it would be, if you saw a crack such as the one you
5 saw in this new screw, would that raise any suspicions on
6 your part as to the quality of the screw?

7 A Yes.

8 Q Did it in this case raise any suspicions?

9 A Yes, I think in the first report, we went further
10 on a different screw to discuss the presence of the crack
11 having been there prior to the plating procedure, which
12 means that it was a fresh crack.

13 Q Okay. In layman's terms does that mean -- and you
14 correct me if I am wrong, but I think I hear you saying that
15 that crack was there in the manufacturing process?

16 A Uh-huh.

17 Q Is that a fair statement?

18 A Yes.

19 Q Okay. And so did that raise your suspicions
20 further if you found two screws that you suspected were
21 cracked in the manufacturing process?

22 A What do you mean by raise my suspicions?

23 Q Did you question or did you suspect the
24 manufacturing process of these screws may have been faulty,
25 if you found two screws out of the number that you were

1 asked to examine?

2 A Well, that would depend on the total number of
3 screws. I think we use a statistical approach as to -- but
4 that would raise an area of concern to look at additional
5 screws.

6 Q What did you do in this case when you found, and,
7 you know, I can only ask you about your own personal
8 reaction, what did you do when you found that two of these
9 screws may have had manufacturing defects in them? Tell me,
10 did you take any documentary steps, did you document it in
11 any way, or what would -- I guess, what would you normally
12 do? Would you normally notify someone, or fill out some
13 kind of form, or if you felt very strongly that there might
14 be a manufacturing defect in some material?

15 A No. Well, our purpose is to write the report and
16 document what we found in that report, and that is what we
17 did.

18 Q But if you had some subjective feeling that had
19 some basis, in other words, I am trying not to put too many
20 words in your mouth, but if have screws that you find cracks
21 in, and you note that in the report, is there any vehicle by
22 which you can notify somebody like, hey, be sure and look at
23 this, or I had a bad feeling about this? Or how is that
24 normally handled just by virtue of the report that you
25 produce? Is that clear?

1 A [Inaudible.]

2 Q Okay.

3 A In cases like -- I don't know how this one was
4 done, but in cases of finding something like that, we are in
5 constant, I guess, verbal contact with our customer. So we
6 would be in constant verbal contact with the customer and
7 say this is what we found. And this would be what we have
8 put in the report, so, from that standpoint.

9 Q Do you know if you did that, do you know if you
10 were in verbal contact with your customer regarding these
11 cracks, do you recall?

12 A No. That would have to be Darrell because he was
13 the principal engineer writing it.

14 Q Okay. That was my next question, as to how would
15 be the point of contact between the lab and the customer,
16 and I think you just answered my question by -- would the
17 metallurgical engineer who actually performed the test be
18 responsible --

19 A Right.

20 Q -- for communicating any concerns?

21 A Right.

22 Q Did you discuss the condition with Darrell? And
23 when I say the condition, let's narrow our point of
24 conversation down to the cracks in the new screws, so when I
25 ask you about the condition, will you understand that I am

1 talking about these cracks that were found. Did you -- do
2 you recall discussing that with Darrell at all?

3 A No, I don't recall.

4 Q Okay. Or do you recall whether he asked you your
5 opinion or whether this was a concern?

6 A No.

7 MR. CLAXTON: Okay. We will go off the record for
8 just a minute.

9 [Recess.]

10 BY MR. CLAXTON:

11 Q Okay. Ms. Frazier, I would like to ask you about
12 a memo dated September 3rd, 1998 that apparently you wrote
13 to Mr. Woods. Are you familiar with that?

14 A Yes, I am.

15 Q Okay. Do you have a copy of that?

16 A Yes, I do.

17 Q Okay. If you could pull yours out, and then I can
18 look at mine and you can look at yours. Okay. This memo is
19 dated September 3rd, 1998, which is approximately three
20 years after the inspection. Can you just briefly explain to
21 me what the nature of the memo is? I have read it, but
22 maybe you can explain it to me.

23 A Okay. The nature of the memo is to explain the
24 two figure sevens, one being in the June 2nd report and the
25 other one being in the June 19th report as being different.

1 And I was asked to explain that because the appearance, from
2 looking at the two figure pages, sort of implied that set H
3 screw was identical to the one we had identified in the June
4 2nd report as being set B screw.

5 Q Okay. So that is in hotel?

6 A Right.

7 Q Okay. Letter H, okay.

8 A So I wrote the memo to give sort of a brief
9 sequence of events and to explain those two figures.

10 Q Okay. Who asked you to write that memo? Or why
11 was the memo written? Well, you just told me why it was
12 written. Who asked you to write the memo?

13 A Terry Woods in Watts Bar.

14 Q Okay. Do you know why he asked you to write the
15 memo, or why it came up three years later?

16 A Because in discussing -- in looking at the two
17 reports, and this was, I guess, after this, we became aware
18 that there was this -- that there were two reports out there
19 and people were looking at the reports. Then the question
20 came up very recently about, well, why are the two figure
21 pages different? And when I looked at my copies, which
22 weren't fairly good copies, they looked -- you know, one
23 figure looks identical to the other one.

24 Q Okay. Ms. Frazier, in looking at the memo, and
25 also looking at the report and the figures, apparently, from

1 what I understand you saying, figure 7 in the first report
2 depicted new screws from samples A and B, is that correct?
3 And I don't have -- is that what the memo is saying?

4 A In the first one or the -- the first one was a
5 failed screw of A and one from sample B.

6 Q Okay. There is the figure 7. I am showing Ms.
7 Frazier and Mr. Fine a copy of -- a photocopy of figure 7,
8 in the initial report dated June 2nd. So I think what we
9 are seeing is initially there was a -- what would you call
10 that figure, is that a microscopic photograph or --

11 A Right.

12 Q Okay. And that is a microscopic photograph of a
13 screw taken from set B, is that correct?

14 A Right.

15 Q Okay. And then in the subsequent report dated
16 June 19th, that figure was removed -- or was replaced with
17 another figure. And I just want to be very clear and make
18 sure I understand what replaced that initial figure and why.
19 I was a little confused by the memo as to why that was
20 replaced. So my question to you would be, first of all, can
21 you tell me, just from your recollection from the report,
22 why figure 7 of a new screw appeared in the first report and
23 what was the significance of that? Was that the one screw
24 out of that set that was cracked?

25 A The one screw that we examined, metallography,

1 that we found a crack on it.

2 Q Okay. And you may have just said something that
3 raises another question, because the memo said, quote, "All
4 of the samples received were not completed analyzed." end
5 quote. Do you recall, or can you tell me from the report
6 whether all of the screws in set B were examined?

7 A Yes, except for the ones that we used to do some
8 in-laboratory fractography.

9 Q And because we will have a court reporter typing
10 this out, can you spell fractography?

11 A F-r-a-c-t-o- --

12 MR. CLAXTON: For the reporter's benefit, I have
13 just turned the tape over. And Ms. Frazier was in the
14 process of spelling fractology for us.

15 THE INTERVIEWEE: Fractography.

16 BY MR. CLAXTON:

17 Q Fractography?

18 A Right.

19 Q And since the tape ended before you finished,
20 could I get you to spell that again for us?

21 A F-r-a-c-t-o-g-r-a-p-h-y.

22 Q Thank you. And it was understanding -- I just
23 want to clear -- or understand that all of the new screws in
24 set B were examined for cracks except for those few that you
25 used for test purposes. Okay. We began the questioning by

1 -- we were talking about that the photograph in figure 7 is
2 of a new screw within set B, and in the subsequent report,
3 June 19th, this figure was removed. [REDACTED] 7c

4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 A Well, General Smith revised the report, so -- and
10 he wrote the report, so he substituted the figures. In my
11 conversation with him -- at that when we doing fractography
12 and figure pages, it was doing using a method of offset
13 printing, and in which you use original Polaroid pictures
14 and you paste them down and we had to send them downtown and
15 rely on them to bring them back.

16 There were some time issues of addressing Watts
17 Bar's time schedule of answering a PER, and we also try to
18 keep our report in a certain a flow process, all of the
19 metallography together, all of the fractography together,
20 all of the tables relating to certain things together, so
21 that when --

22 Q Let me interrupt you just a minute. You mentioned
23 a PER. Is that a P-E-R?

24 A Right.

25 Q Okay. And that stands for?

1 A I don't know [inaudible].

2 MR. FINE: It is a problem evaluation report.

3 BY MR. CLAXTON:

4 Q Problem report, okay. Problem evaluation report.

5 MR. FINE: One thing is Ms. Frazier is not --

6 THE INTERVIEWEE: [Inaudible.]

7 MR. FINE: Is not in Hydro and not in Nuclear.

8 She doesn't live with these things.

9 THE INTERVIEWEE: On a daily basis. Okay.

10 BY MR. CLAXTON:

11 Q And the reason I will ask it, these things
12 occasionally are missed for the recorder's benefit, so when
13 they type it out, they will -- they will have a stab at what
14 it stands for. So that's a PER, and I am sorry I
15 interrupted you. But you were talking about the timeframe
16 you were working under, under the PER.

17 A Right.

18 Q Is that because PERs have a deadline that certain
19 actions have to be taken?

20 A My understanding is they do, yes.

21 Q Okay. And so you were telling me about the
22 process by which you attach Polaroid pictures and send it to
23 TVA headquarters, and I will let you pick up.

24 A To TVA's printing offices. And that, for us,
25 before the days of digital imagery, which we have now, thank

1 God, but that was a very slow process. And it usually took
2 us, even when we rushed them, two to three days to get a
3 response back. A normal turnaround time was two weeks. So,
4 because we are not their only customer.

5 So, just to be able to put out the product, the
6 figure was substituted because it was very similar to what
7 was found in the fracture mode, and it would have been just
8 duplicating what was already seen in some of the other
9 photographs.

10 MR. FINE: Was that clear, did you --

11 MR. CLAXTON: Yes.

12 BY MR. CLAXTON:

13 Q I understood you to say that it was a similar type
14 fracture.

15 A Right.

16 Q Even though that it was -- even though it was a
17 new screw, as opposed to a screw that was inservice.

18 A Right.

19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]

7c

23 Okay. Ms. Frazier, in the report dated June 19th,
24 which was the subsequent report, Mr. Smith basically rewrote
25 it because of some concerns, I think I understood you to say

7c

1 that there was some -- possibly some wording, and as matter
2 of fact, if you don't mind, I will just ask you again, I
3 think there were some -- were there some conclusions made in
4 the first report that you did not feel could be made by a
5 metallurgist, is that the reason for the report being
6 rewritten?

7 A No, it is not that the statements couldn't be made
8 by a metallurgist, they just couldn't be made by a
9 metallurgist in the lab.

10 Q Right. Okay.

11 A And we have a tendency to sort of sometimes
12 overstep our bounds, depending on which customer we are
13 dealing with, because some of our customers don't understand
14 metallurgy and some do, and being helpful, we have a
15 tendency to give them some objective views of what could
16 have possibly happened, which we term as a root cause versus
17 failure mechanism. And our primary job, which is what we
18 were asked to do in this report, is to provide the failure
19 mechanisms. So, those were basically the differences, in
20 that we -- those, there were some concluding statements that
21 dealt more with root cause and instead of our actual
22 laboratory testing.

23 Q Now, on the June 19th, '95 report, in the very
24 first paragraph in there, it said there was a request to
25 determine the failure mode and verify the material type. Do

1 you have your report there where you can --

2 A Uh-huh.

3 Q Now, you mentioned failure mode and root cause,
4 and in the report it asks you to request -- I'm sorry, there
5 was a request to determine the failure mode. Did the report
6 come up with a failure mode?

7 A Yes.

8 Q Did it state a failure mode?

9 A Yes.

10 Q And that was what?

11 A Intergranular separation.

12 Q And it also asked to verify the material type, and
13 I think we talked earlier about the table.

14 A Right.

15 Q You verified the material type and that it met
16 ANSI standards. Okay. In the failure mode of the report
17 dated June 19th, did you address set B, the new screws and
18 whether they -- well, before I ask that question, did the --
19 any of the set B screws exhibit intergranular separation?

20 A Separation.

21 Q Separation.

22 A There was intergranular cracking in -- from the
23 first report in the set B, on the -- on the transverse
24 section.

25 MR. FINE: We have a court reporter.

1 MR. CLAXTON: Let's -- we will go off the record
2 just for a short while.

3 [Recess.]

4 MR. CLAXTON: We are back on the record with the
5 same parties present. And Ms. Frazier, I would like to
6 remind you that are under oath for the information that you
7 give us.

8 BY MR. CLAXTON:

9 Q I would like to go back to the discussion we were
10 having about the replacement of figure 7. ([REDACTED]

11 [REDACTED] 7C
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED])

19 it looked so much similar to the top photograph of the other
20 one that it is just a repeat of saying the same thing or
21 documenting the same thing. We have a tendency that if
22 everything looks the same, to put a typical photograph in
23 there just, you know, showing that condition for that screw.

24 Q Okay. I think how we led into that, we were
25 talking about the photographs and the process by which --

1 A We had them produced.

2 Q You had them produced. Okay. And somehow I think
3 we ended there and we never kind of made the full circle as
4 to how that effected the replacing of the figure. Do you
5 want to go into that?

6 A Okay. In doing offset printing, as I said, this
7 is process and it is a tedious process, and depending on
8 where we fell into the scheduling for the printing office,
9 we could get something in two or three days or it could be
10 two or three weeks, and we were, I guess, for lack of a
11 better term, under pressure to produce this report to help
12 Watts Bar meet their deadline.

13 And so the figure was substituted because it
14 looked so much similar to what we had been discussing
15 throughout the report. So I don't think anybody realized at
16 the time that it was anything different than putting in a
17 typical photograph describing the condition that you saw for
18 all the screws.

19 Q Now, how did you catch that, or when I say how did
20 you catch that, apparently there was -- was there some
21 correction, -- let me reword that question. At some point
22 did you realize that that was an oversight? [REDACTED]

23 [REDACTED]

24 [REDACTED]

25 MR. FINE: He asked you what -- how did you become

7c

7c

1 aware of that?

2 THE INTERVIEWEE: Oh. Not until the -- we -- it
3 was brought to my attention that this June 2nd report still
4 existed, and that we had not included information on both,
5 on both reports, it wasn't similar.

6 BY MR. CLAXTON:

7 Q And who brought that to your attention?

8 A Vonda did.

9 Q Okay. And let me ask if this has to do with what
10 we are talking about. I have a memo here. I am unable to
11 determine the date of it, but it is signed by Terry Woods,
12 and is to Mr. J. Maddox. Who is Mr. Maddox? That's -- the
13 spelling of his name is M-a-d-d-o-x.

14 A He is, I think, the head of engineering,
15 engineering management at Watts Bar.

16 Q Okay.

17 MR. FINE: Gary, just for your benefit, at the top
18 of this document, this is what TVA calls a RIMS number, and
19 the middle set of numbers, the 98-10-20 is the date that it
20 was put it into RIMS.

21 MR. CLAXTON: I see.

22 MR. FINE: Which would, of course, be October 20th
23 of 1998.

24 MR. CLAXTON: I see.

25 MR. FINE: And based on our discussions with Terry

1 and looking at a document that this was attached to, this
2 document was produced on or about that date.

3 MR. CLAXTON: Okay. Thank you.

4 BY MR. CLAXTON:

5 Q Do you have that memo, Ms. Frazier?

6 A No.

7 MR. CLAXTON: Okay. Why don't we go off the
8 record just a minute. I'll let you take a look at that.

9 MR. FINE: I have got a copy of it.

10 [Recess.]

11 MR. CLAXTON: All right. We are back on the
12 record.

13 BY MR. CLAXTON:

14 Q And Ms. Frazier, we were looking at a memo from
15 Mr. Woods to Mr. Maddox. And had you ever seen that memo
16 before?

17 A No.

18 Q Okay. And while we were off the record, you
19 stated that was a cover memo for the reconciliation report.

20 [REDACTED] 7C
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]

24 A Right. It is referring to the cracking observed
25 in one of the set B screws being omitted from the second

1 report, from the June 19th report versus being in the June
2 2nd report.

3 Q Now, was -- this is, and I say this, the reference
4 to the set B screws, is that something that Mr. Smith left
5 out in his subsequent report, or the report of June 19th?

6 A The cracking of set B.

7 [REDACTED]
8 [REDACTED]

9 A [REDACTED]

10 Q [REDACTED]

11 A [REDACTED]

12 Q [REDACTED]
13 [REDACTED]

14 A [REDACTED]

15 Q Are you aware, or did he come to you and ask you
16 your advice about whether he should leave that information
17 out?

18 A No.

19 Q Did he say anything to you about whether someone
20 had instructed him to leave that information out?

21 A No.

22 Q Okay. The final statement, this MD memo from Mr.
23 Woods to Mr. Maddox states that laboratory test results
24 indicate overall metallurgical core properties of the screws
25 were adequate for the intended application. And I am sure I

7C

7C

1 need to ask Mr. Woods this, but are you familiar with which
2 screws he is referring to? Would that have been the new
3 screws that were in the warehouse? And what -- do you have
4 any understanding there?

5 A I think the -- I know I don't, but I think -- I am
6 just trying to remember.

7 Q Yeah.

8 A But I think when we -- when I reviewed this and
9 looked at it, I think it was for all of them.

10 Q Okay. In other words, this group of screws is
11 adequate metallurgically?

12 A Right.

13 Q Would that be a correct statement?

14 A Right.

15 Q I mean according to what we are reading on the
16 memo?

17 A Right.

18 Q Thank you. Okay. Do you have any questions about
19 what we have talked about?

20 A [Inaudible.]

21 MR. CLAXTON: Let's take a short break.

22 [Recess.]

23 MR. CLAXTON: Okay. Ms. Frazier, we are back on
24 the record with the same parties present. I would add that
25 we have a court reporter in the room who is not recording

1 this conversation, but is here for the next interview but is
2 not involved in the interview -- not involved in this
3 interview in any way.

4 BY MR. CLAXTON:

5 Q Ms. Frazier, were you involved in any way with
6 discussions with Westinghouse regarding the ice screws, the
7 ice basket screw issue?

8 A No.

9 MR. CLAXTON: Okay. I don't think I have any
10 other questions. Mr. Fine, do you have anything?

11 MR. FINE: Just a couple of things.

12 BY MR. FINE:

13 Q Ms. Frazier, would you just very briefly tell us
14 what the function of the Central Labs organization is at
15 TVA?

16 A Of our entire Central Lab?

17 Q Yes.

18 A Okay. The function of the Central Laboratories is
19 to provide testing of instrumentations, that includes
20 calibrating instruments, repairing instruments, basically,
21 all types of instrumentation, pressure, electrical, flow
22 used to record data in the plant. Also, there is a full
23 chemistry laboratory for doing analytical chemistry. There
24 is four labs that do insulating, waste oil and lubricating
25 oil and test all of those oils for TVA, new and used.

1 We just added a field testing services department
2 that actually go out and do testing on turbines and several
3 of the components in and around the TVA system. And we have
4 an engineering qualification or environmental qualification
5 lab that primarily tests components new and also there is a
6 shaker table related to seismic testing and all to see how
7 those instruments would function in a plant situation.

8 And my area, being the metallurgical laboratory,
9 we do analysis on all types of materials in TVA. We work
10 for Nuclear Fossil Transmission, Hydro, any organization in
11 TVA that may have a problem related to something we could
12 test.

13 Q So, basically, organizations, TVA organizations
14 come to you and ask you to do some kind of testing on --

15 A Right. Various components.

16 Q Okay. But you are organizationally part of the
17 Fossil organization?

18 A Right. And it is also Hydro, we are part of
19 Fossil and Hydro Power, then Maintenance and Testing
20 Services in the Central Laboratories and Field Testing
21 Service.

22 Q And that, of course, is separate and distinct from
23 the TVA Nuclear?

24 A Right.

25 Q And we have heard the name Terry Woods. Is Mr.

1 Woods in your chain of command?

2 A No. He is in Nuclear Power.

3 Q Okay. And just again, just to make sure that it
4 is clear, because, frankly, this is something that confused
5 me, and I just want to make sure that, hopefully, it won't
6 confuse anybody else. I would like Ms. Frazier -- directing
7 your attention to what we have been talking about, the June
8 2nd, '95 report and the June 19th, 1995 report, the term
9 "new screw" is used in a couple of places in the June 2nd,
10 1995 report. Was that always referring to the screws we
11 have been referring to as set B?

12 A No.

13 Q What was -- was there another screw that was being
14 referred to?

15 A There was one screw from set A that was also
16 referred to in the June 2nd report as a new screw. We were
17 also asked to clarify that up in the second report, to sort
18 of go back through our data to determine which screw we were
19 referring to. So I know some of the instances in the June
20 2nd report actually applies to the new screw from set A
21 which we referred to in the second report as whole screws
22 that not been inservice.

23 Q And if I can specifically refer you to -- on the
24 second page of the June 2nd report, there is a discussion
25 here of two screws, one new and one used, were intentionally

1 fractured with a hammer in order to determine the failure
2 mechanism.

3 A Uh-huh.

4 Q The new screw, was that the screw from set A or a
5 screw from set B?

6 A Set A.

7 Q And is that clarified in the version of the report
8 issued on June 19th?

9 A Yes, it is. The sentence says two screws, one
10 from set A and one from set G, were intentionally fractured
11 with a hammer in order to determine the failure mode.

12 MR. FINE: Okay. I think that is all I have. Do
13 you have any -- does that inspire you?

14 BY MR. CLAXTON:

15 Q Now, in addition, let's make sure -- again, make
16 sure we are thinking along the same lines, you said that
17 some of the screws from set B were also destroyed?

18 A Uh-huh.

19 Q For testing?

20 A Uh-huh.

21 Q Okay.

22 A Those were destroyed at the -- when it says two
23 new screws from set B were destroyed at 15 degrees
24 Fahrenheit.

25 MR. FINE: And that is referring to the June 19th

1 report?

2 THE INTERVIEWEE: Right. Uh-huh.

3 BY MR. CLAXTON:

4 Q Have you ever been involved in a situation where
5 you were asked to correct a report such as you were in this
6 case?

7 A I have been in situations constantly where we are
8 asked to explain our results, yeah.

9 Q Do you recall a situation where you changed a
10 report because of some question of wording, such as you had
11 in this report?

12 A Yes.

13 Q Do you recall that specific situation?

14 A Yes.

15 Q Okay. How did you resolve that or was that a
16 matter of getting together with someone and they questioned
17 the words that were used, or how did you proceed through
18 that process?

19 A Basically, we were asked to look at that word. It
20 was a situation which we had a weld failure and we had,
21 basically, a very poor weld and we used the term
22 detrimental, that that weld as detrimental, and could be
23 detrimental in inservice, and our customer asked us to look
24 at that word because detrimental implied, to me, an overall
25 problem and possibly all welds would have to be looked at

1 that were made and using that same, similar procedure. But
2 for us, detrimental meant that it had porosity and cracking
3 that was not good weld, a good weld. So we were looking at
4 it from the material standpoint and the customer felt that
5 that word implied more than what we interpreted it to be.

6 Q Okay. So, in that case, each operation had their
7 own use of the word with different meanings?

8 A Right.

9 Q And your customer in that case asked that you
10 change the word because when it transferred over to the
11 operations side it took on a different meaning?

12 A Right.

13 Q Which was -- caused an unfortunate [inaudible].

14 A Right. Because we were looking at it from this
15 one particular weld in one particular situation.

16 Q I see. And in the instance that we are talking
17 about here, where you were asked to revise your report, it
18 was because, if I understood you correctly, it was because
19 there were some statements that assumed some things that
20 could not be proved in the lab?

21 A Right.

22 Q Okay. All right. Do you have any questions about
23 what we have talked about today?

24 A Uh-uh.

25 Q Have you provided all this information freely and

1 voluntarily?

2 A Yes.

3 Q Okay. Have you received any promises or threats
4 from either myself or any other employee at the Nuclear
5 Regulatory Commission?

6 A No.

7 MR. CLAXTON: Do you have any other questions, Mr.
8 Fine?

9 MR. FINE: Just that I think as we may have
10 discussed off the record, I believe Ms. Frazier would like
11 the opportunity to review what is in the transcript that is
12 prepared.

13 THE INTERVIEWEE: Right.

14 MR. FINE: Whenever that comes in the normal
15 process.

16 MR. CLAXTON: All right. That is so noted. And I
17 appreciate your patience with us today. And we will
18 reserve, through Mr. Fine, the opportunity to talk with you
19 again if we have any other questions, if that's all right.

20 Thank you very much. That concludes the interview
21 at approximately 11:46 a.m.

22 [Whereupon, at 11:46 a.m., the interview was
23 concluded.]

24

25

CERTIFICATE

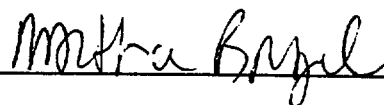
This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

Name of Proceeding: INTERVIEW OF
 DELSA FRAZIER
 (CLOSED)

Docket Number:

Place of Proceeding: Chattanooga, TN

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission transcribed by me from recorded tapes provided by the Nuclear Regulatory Commission, and that the transcript is a true and accurate record of the foregoing proceedings to the best of my belief and ability.

_____

Martha Brazil

Transcriber

Ann Riley & Associates, Ltd.