

ORIGINAL
OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: Investigative Interview of
Jeffrey C. Barbro (CLOSED)

Docket No.

LOCATION: Cincinnati, Ohio

DATE: February 20, 1990

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EXHIBIT 12
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1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

3
4 OFFICE OF INVESTIGATIONS

5 - - - - -X

6 In the Matter of: :

7 INVESTIGATIVE INTERVIEW :

8 JEFFREY C. BARBRO :

9 (CLOSED) :

10 - - - - -X

11
12 Offices of BECKMAN, WEIL,

13 SHEPARDSON AND FALLER

14 Suite 1714

15 105 East Fourth Street

16 Cincinnati, Ohio 45202

17 February 20th, 1990

18
19 The above-entitled matter commenced at 1:45
20 o'clock p.m., when were present:21
22 On behalf of the Nuclear Regulatory Commission:23
24 RICHARD C. PAUL, Investigator

25 MARY KAY FAHEY, Investigator

1 On behalf of the witness:

2
3 BECKMAN, WEIL, SHEPARDSON AND FALLER

4 BY: Margaret A. Fiorino, Esq.

5 Peter L. Cassady, Esq.

6 Suite 1714

7 105 East Fourth Street

8 Cincinnati, Ohio 45202

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PROCEEDINGS

[1:45 p.m.]

MR. PAUL: For the record, this is an interview of Jeffrey Barbro, B-A-R-B-R-O, who's currently employed by the University of Cincinnati, Cincinnati, Ohio. The location of this interview is Cincinnati, Ohio. Present at this interview in addition to Mr. Barbro are Peter Cassady, Peg Fiorino with the law firm of -- which law firm?

MS. FIORINO: Beckman, Weil, Shepardson and Faller.

MR. PAUL: And Mary Kay Fahey and Richard C. Paul with the Office of Investigations, U.S. Nuclear Regulatory Commission. As agreed, this interview is being tape recorded by court reporter Ronald LeGrand. Subject matter of this interview concerns the University of Cincinnati Medical Center in Cincinnati, Ohio. Whereupon,

JEFFREY BARBRO, a witness, was called for examination, and, having been first duly sworn, was examined and testified as follows:

MR. CASSADY: Mr. Paul, at the outset, I'd like to confirm with you at this time that you have told me over the telephone that Mr. Barbro is not currently a target of investigation.

MR. PAUL: That's right.

1 MR. CASSADY: By your office.

2 MR. PAUL: Right. We're interviewing him as a
3 witness.

4 MR. CASSADY: Thank you very much.

5 EXAMINATION

6 BY MR. PAUL:

7 Q Mr. Barbro, I'd like to ask you if the two
8 attorneys here, Mr. Cassady and Ms. Fiorino, are your
9 personal counsel?

10 A Yes, they are.

11 Q Are they provided to you by your employer?

12 MR. CASSADY: Objection. Don't answer that
13 question.

14 MR. PAUL: There's no objections.

15 MR. CASSADY: I'm telling him not to answer the
16 question.

17 MR. PAUL: Why not?

18 MR. CASSADY: We've been through this before and I
19 thought we had reached an understanding. I guess we hadn't.
20 He has counsel and how he has counsel is a matter between
21 himself and me. I don't think it pertains to you.

22 MR. PAUL: Do you represent other parties in this
23 matter?

24 MR. CASSADY: We represent other individuals.

25 MR. PAUL: Who are they?

1 MR. CASSADY: We've told you that already.

2 MR. PAUL: I want to put it on the record.

3 MR. CASSADY: We represent Pat Harris, Jeff
4 Barbro, Melvin Boyd. We also represent Ray Estes and just
5 recently we've started to represent Prince Jason. That's
6 all we represent.

7 MR. PAUL: Do you represent George Alexander?

8 MR. CASSADY: No, I don't.

9 MR. PAUL: Do you represent the University of
10 Cincinnati Hospital?

11 MR. CASSADY: No.

12 MR. PAUL: Or the University of Cincinnati or the
13 State of Ohio?

14 MR. CASSADY: No.

15 MR. PAUL: Do you believe there will be a conflict
16 between Mr. Barbro's interests and any of the interests of
17 the other parties?

18 MR. CASSADY: We don't believe there will be.

19 [Pause.]

20 Any other parties that you've mentioned?

21 MR. PAUL: Pardon?

22 MR. CASSADY: Any of the other parties that we
23 represent?

24 MR. PAUL: Right.

25 MR. CASSADY: Well, obviously not or we wouldn't

1 be representing them. I mean if there is a conflict, then
2 we'll have to deal with that as it comes but at this point
3 in time, we don't see a conflict.

4 BY MR. PAUL:

5 Q Mr. Barbro, do you believe there's a conflict
6 between Mr. Cassady's representation and the University of
7 Cincinnati Hospital as your employer?

8 A Could you restate that?

9 MR. CASSADY: I didn't understand that question
10 either.

11 BY MR. PAUL:

12 Q Do you believe that your interests will conflict
13 with the interests of the University of Cincinnati Hospital
14 in this matter?

15 A My personal interests?

16 Q Right.

17 A Hard to say for sure. I imagine it's a
18 possibility.

19 Q Do you realize that Mr. Cassady represents other
20 parties in this matter?

21 A Well, yes.

22 MS. FAHEY: Is that your request that they be
23 present here today at this interview?

24 THE WITNESS: Yes.

25 MS. FAHEY: Would you be willing to conduct the

1 interview without them being present?

2 THE WITNESS: Personally, no.

3 MR. PAUL: Can we go off the record?

4 MR. CASSADY: Sure.

5 [Discussion off the record.]

6 BY MR. PAUL:

7 Q Mr. Barbro, you have no objection to Mr. Cassady
8 or Ms. Ficrino sitting in?

9 A I don't have any objection whatsoever.

10 Q In the situation with who's providing your
11 representation is clear to you and you understand?

12 A Yes, I do.

13 Q What's your current position with the University?

14 A I'm a senior health physics technician.

15 Q How long have you been in that position?

16 A I'm going to give you an approximate figure. It's
17 almost a year -- a little less than a year.

18 Q How long have you been at the University of
19 Cincinnati?

20 A It was four years, December, which was last
21 December.

22 Q 1986?

23 A December of 1985.

24 Q What did you initially start? What position were
25 you in when you first went to work there?

1 A I believe the term used then was rad health
2 technician -- radiological health technician.

3 Q What was your background as far as health physics
4 up to that point in time?

5 A Previous to that I was a senior health physics
6 technician working in nuclear power.

7 Q Where was that?

8 A Previous to that, I worked for a company called
9 Rad Services, Incorporated. They supplied technical support
10 to utilities during maintenance and refueling outages.

11 Q Do you have any educational background in health
12 physics?

13 A Directly in health physics, no, other than
14 training I received in the industry and some associated
15 education that could be applied to the field, but directly
16 germane to health physics, no.

17 Q When you initially went to work at the University
18 of Cincinnati in the radiation safety department, who was
19 the RSO which is the acronym for radiation safety officer?

20 A That was Mr. Kenneth Fritz.

21 Q During your entire employment, was Mr. Fritz the
22 RSO?

23 A Up to -- yeah, up to a certain time, yes.

24 Q What time -- when did he leave?

25 A Well, see that's hard to say exactly. He was -- I

1 believe the term is, put on administrative leave. It would
2 be according to whenever the NRC approved the replacement of
3 him with Dr. Howard Elson on the Nuclear Regulatory
4 Commission broad license and other associated licenses at
5 the University of Cincinnati.

6 Q Is roughly August?

7 A August or early September, that general time
8 frame. You'll have to forgive me for not knowing exactly
9 but there was a lot of things going on at that time.

10 Q Going to the time frame of the summer of 1988,
11 what was your position at that point in time?

12 A At that time, I believe I was a health physics
13 technician, what they call staff technician.

14 Q Who was your immediate supervisor in that
15 position?

16 A Well, at that time -- I'm trying to remember
17 whether or not they had created an official title for the
18 Deputy Radiation Safety Officer. Mr. Jason handed tasks
19 down. You know, he was sort of coordinating tasks and you
20 know, I took direction from him but also I received direct
21 from Mr. Fritz.

22 Q So Mr. Jason was an intermediary. Was that a
23 formal position or was it just a situation that occurred?

24 A My understanding is that until -- that it wasn't
25 always a formal position. It was just sort of like an

1 internal appointment and that up to a certain time in our
2 license, okay, as far as license goes, up to a certain
3 point, there was no declared deputy radiation safety officer
4 listed on the license until some of our most recent
5 amendments. So -- and also, it's my understanding although
6 I'm not positive of this, that there was no official title
7 within the University system for deputy radiation safety
8 officer and that Mr. Jason's official classification up to a
9 point -- up to a date which I don't know was senior
10 technician.

11 Q What I'm looking for, who directed your day to day
12 activities back in that time?

13 A I would have to honestly say that both Ken Fritz
14 and Mr. Jason.

15 Q I believe in August, 1988, there was an NRC
16 inspection by a Mr. Gibbons; do you recall that?

17 A Yes, I recall that.

18 Q At that particular point in time, was there a
19 system for maintaining an inventory of the sealed sources
20 that the University had in their position or controlled
21 under the license?

22 A Yes, there was.

23 Q Could you explain to us what the procedure was
24 back then?

25 A The procedure was, there was index cards with the

1 essential source information. Those were used to record the
2 required wipe tests for leakage of the sources and they were
3 used in that form of record.

4 Q Say that again?

5 A There's an index card with the essential data
6 identifying the source's.

7 Q Right.

8 A Okay, and then whenever the materials was leak
9 tested, okay, then that data would be entered.

10 Q Onto the card?

11 A Onto the card and it functioned in that fashion as
12 the inventory mechanism for the sources as well as leak test
13 record.

14 Q Did each individual source have a single inventory
15 card?

16 A I can only -- it was intended that every source
17 would have. You know, there -- it's -- I don't know whether
18 every source had a card.

19 Q Did you ever have occasion to perform a leak test
20 and then attempt to document it on a card and not find a
21 card there?

22 A No, because the -- only when I was able to
23 identify which ones existed were off the cards.

24 Q Was there -- were you required to sign the card
25 when you performed the wipe -- or the leak test -- or the

1 wipe test.

2 A We went away from -- when I say -- try to think --
3 it's been a while since I've done the leak tests on those.
4 I'm trying to remember whether we initialed them or not. I
5 don't even think we initialed the cards now. That -- at
6 that time, we did not initial the cards even.

7 Q What was the procedure when you were assigned to
8 perform the leak tests. Would you be issued the card or
9 what was the procedure?

10 A Well, they had all the cards in like a little file
11 -- card file.

12 Q Where was that located?

13 A ^s That was located in the Radiation Safety Office,
14 and --

15 Q Ken Fritz' office?

16 A It was located in the common office.

17 Q What's the common office?

18 A It's the area that would be exclusive from Ken's
19 office, which had a separate door on it and the hot labs.

20 Q Was anyone in charge of the cards, responsible
21 directly for them or were they just accessible?

22 A They were just maintained in the file and whoever
23 was assigned to do the leak testing, the periodic leak
24 testing, would go to the file, pull the cards, locate the
25 sources, perform the wipe test, bring the wipe test back to

1 the lab for analysis and then record the data on a card.

2 Q Was there a written procedure for performing wipe
3 tests?

4 A No, there was not.

5 Q How did you become familiar on how to perform
6 these?

7 A Basically, I was -- there was -- I was trained by
8 both Ken Fritz and Mr. Jason and Carla Shiffos.

9 Q Who's Carla Shiffos?

10 A She was a person who is in the senior position
11 prior to Mr. Jason.

12 Q Is she currently employed by the University?

13 A No, she is not.

14 Q Did you ever have occasion to attempt to perform
15 a leak test and be unable to find the source?

16 A Yes.

17 Q Could you give us the details of that?

18 A Well, it was a -- some Americium, low activity
19 Americium sources that were a set of, I believe, a small
20 sources that --

21 Q What do you mean by small?

22 A Well, I believe -- I can't remember the exact
23 activity of them but they were probably no more than half an
24 inch across -- less than that actually. I would say about
25 a quarter inch across and they were disk shaped.

1 Q Were these seeds?

2 A No, no. Oh, no. These were -- it was a -- one of
3 the authorized users was a researcher, was using them in
4 some sort of experiment. I don't know exactly the purpose
5 of it. It had to do with obstetrics and gynecology research
6 and -- but they were later -- they were -- the one I
7 couldn't find was later found and it was later located. I
8 did have trouble at the immediate time, you know, when I
9 went out to do it. They had been misplaced by the
10 authorized user.

11 Q Was it required that the authorized user possess a
12 sealed source?

13 A It's a requirement of the license, okay, that all
14 persons using radioactive material be approved by the
15 radiation safety committee. That's the license policy.

16 Q What occurred in practice?

17 A I would say for the most part, there's probably a
18 couple of instances where there were sources like check --
19 well, see, depending on activity, too. It would depend on
20 the amount of activity. Like if someone had an exempt check
21 source.

22 Q What's an exempt check source?

23 A Well, an exempt check source would be a check
24 source that contained material that did not require
25 licensing per 10 CFR 30 and those -- I don't -- I think that

1 there were some of those out that didn't have authorized
2 user. They didn't have like an approved procedure or
3 protocol for possessing them. They were just like for
4 instrument check sources.

5 MS. FIORINO: They were gamma sources.

6 THE WITNESS: No, they would have been gamma
7 sources, mostly, or a beta, gamma. A lot of them would have
8 been cesium 137 which is really a beta source but it's got a
9 decay product that's a -- you know, a gamma source.

10 BY MR. PAUL:

11 Q In an instance where you had trouble initially
12 finding the sources, who was that that was responsible for
13 those sources?

14 A The investigator?

15 Q Right.

16 A I believe his name was Dr. Holt.

17 Q He was an authorized user on the NRC license?

18 A He had a research protocol, I believe, but I'm not
19 positive about that.

20 Q What time frame were you -- did this occur?

21 A Geez. That's hard to pinpoint. I would say
22 between a year and a half and two years and it was found by
23 someone else who went to perform that same task after, you
24 know, afterwards.

25 Q How much afterwards?

1 A I'm trying to think whether it would have been
2 three months perhaps. You know, I can't be positive. It's
3 -- because the other -- the other sources we were able to
4 locate and we made, you know, we made a -- I believe we made
5 a note or told somebody that one of them was absent and
6 notified the investigator. Actually we notified the
7 investigator's assistant because the investigator was out of
8 that laboratory at that time and it took just a while for
9 them to physically locate it.

10 Q Were Fritz or Jason aware of the -- were Fritz or
11 Jason aware that these sources were missing for three
12 months?

13 A I believe so. I believe that I even mentioned to
14 either one of them and that -- because we had contacted --
15 there was an effort made to locate it within the office.

16 Q By who?

17 A Well, I know I questioned the laboratory assistant
18 and when I left I said, you know, tell Dr. Holt I need to
19 know where the source is. Later it turned up in that
20 general location all the time -- but they're so small and
21 they're being attached to different pieces of equipment. It
22 had just been overlooked.

23 Q Were you aware that there were in this time frame,
24 summer of 1988, there were other sources that the other Rad
25 techs had found missing? You were aware of those

1 circumstances?

2 A Yes, I was aware that there was sources that had
3 been attempted to have been located, that they never found.
4 And -- they just couldn't locate their sources.

5 Q Do you know any specifics of that, like dates, or
6 persons involved?

7 A As far as dates -- I really couldn't pin it down
8 as far as dates. I can give you the general specifics of
9 what I know about that though.

10 Q Okay, go ahead.

11 A I think it was Mr. Zimbrodt -- he was a technician
12 previously with our office -- had initially discovered the
13 absence of these sources and notified the management of that
14 and they attempted -- I know for sure that there were
15 several communications with the authorized user, or the
16 person who was responsible for those sources who was using
17 them. They were gas chromatograph sources. They were foil
18 sources. Nickel 63 was the isotope and they were used in a
19 gas chromatograph and apparently they had been -- when there
20 was a moving of furniture for storage, the source had been -
21 - supposedly -- this is what we think, or this is what I
22 heard -- been in a desk.

23 They had been transported to a storage location
24 outside of the laboratory and were stored with a bunch of
25 other furniture in an area that was later renovated. And I

1 know -- I don't the specific scope of the attempt made, but
2 there was an attempt to locate them.

3 Q By who?

4 A I believe there were communications between Greg
5 Zimbrodt and the authorized user. I believe that also Mr.
6 Jason attempted to locate those and I believe that also
7 there was communication from Mr. Fritz to Dr. Tan was his
8 name. And -- but as far as all the details of the
9 correspondence, I wasn't privy to all of that. All I knew
10 was that there was talk about those being missing and not
11 being able to be located.

12 Q Do you know if they ever found the sources?

13 A I do not think they ever found those. Not that I
14 know of.

15 Q That was the Nickel 63 source?

16 A I believe there were two sources. I'm not
17 absolutely positive. I believe it was two sources, Okay,
18 because I remember there were two sets of cards. Now the
19 records -- the way they kept the card records, you know, was
20 a little confusing, but I think it was two sources. Nickel
21 63 -- I forget how much of the original assayed activity it
22 was -- it was in the millicuries, but that's really --
23 because I remember the issue of the two cards, two sets of
24 cards and so I am relatively positive it was two sources.

25 Q And what type are omitted? Is that a gamma?

1 A It's a Beta emitter.

2 Q And what's the half-life of nickel, do you know?

3 A Oh, I'd have to look it up. It's fairly long.

4 BY MS. FAHEY:

5 Q What's a potential safety hazard, the strongest
6 thing in a desk drawer?

7 A Well, this would be a subjective judgment. You
8 see, it's relatively low energy Beta. I'd have to look up -
9 - it's less than a hundred KB Beta, I believe, and the
10 sources themselves were encased in a steel holder or a metal
11 holder, I'm not sure it was steel, and they should have been
12 relatively stable, unless they are subjected to high
13 temperatures, and there was no evidence of leakage of those
14 particular sources on the cards prior to them missing. I
15 would say that if you're actually looking -- my subjective
16 judgment as to the health hazard would be that it would be
17 low.

18 BY MR. PAUL:

19 Q Could they be ingested?

20 A No, well, it wouldn't be -- it would not be easy
21 to do. You'd have to dismantle the holders and then you'd
22 have a metal foil that this material is plated onto, that
23 the Nickel 63 is plated onto -- and then you would have to
24 either remove, through some chemical means, the activity
25 from the metal foil and then adjust it in that fashion --

1 Q Were both the sources that were missing on the
2 same metal rod? You indicated there were possibly two.

3 A No, they would have been -- each separate foil
4 would have been enclosed in separate containers.

5 Q But they were both related to the same machine or
6 --

7 A I'm not sure whether it was for the same gas
8 chromatograph, but they were both for gas chromatographs.
9 Yes, I'm sure that they are both gas chromatograph sources.
10 I'm not positive as to whether or not they were the same
11 machine.

12 Q And the technician that was directly involved with
13 that was that Zimbrodt, correct?

14 A As far as the initial discovery of them missing,
15 yes.

16 Q Did the issue continue to be brought up or did it
17 just die at that point?

18 A It wasn't a hot topic of conversation.

19 Q Do you recall that in August of 1988 there was an
20 NRC inspection conducted by Gibbons, an NRC inspector?

21 A Yes.

22 Q Do you recall that prior to that there was a topic
23 of conversation, at least among some of the Rad techs,
24 regarding missing sources?

25 A Yes, well yes.

1 Q Was that the sources you just described to us?

2 A Yes.

3 Q And to your knowledge there was only two missing?

4 A Those were the only ones I knew of, yes -- at that
5 time, yes.

6 Q Did you have any direct knowledge of the removal
7 of the inventory cards from the file by Mr. Fritz?

8 A By Mr. Fritz?

9 Q Or under his direction -- I believe Jason actually
10 was the one who removed them.

11 A Well, I was aware that the cards that we're
12 speaking of were not available for the inspection.

13 Q And where were the cards?

14 A They were in a desk drawer.

15 Q In whose desk drawer?

16 A There's a technician named Melvin Boyd.

17 Q And do you know how they came to be in his desk
18 drawer?

19 A Yes, I do.

20 Q And how was that?

21 A They were given to him by Mr. Jason.

22 Q Do you know what the reason was for him to -- Mr.
23 Jason -- did you have any discussions with Mr. Jason about
24 this?

25 A Not at that time, no.

1 Q Did you have any discussions with Mr. Boyd?

2 A Well, there's three of us sitting there when the
3 cards were handed to Mr. Boyd or Mr. Jason.

4 Q So you actually saw this happen?

5 A Yes I did.

6 Q And -- were you aware that there was an upcoming
7 NRC inspection at that point?

8 A Yes, I was.

9 Q And Mr. Jason handed Mr. Boyd the cards, is that
10 correct?

11 A Yes, he did.

12 Q And what did he tell him to do with the cards?

13 A These may not be the exact words, but it's very
14 equivalent. The equivalent words were, "Here, do something
15 with these."

16 Q Was there any other discussion on the purpose of
17 why he gave him the cards?

18 A No. Not that I'm aware of, not when I was sitting
19 there, present, when that occurred, no.

20 Q Do you recall how many cards there were?

21 A It was -- two sets I believe, of two cards stapled
22 together on each set, and each set was for one source, so
23 there was two source -- cards for two sources.

24 Q And --

25 A Is that confusing, or --

1 Q Each source had two cards because of the number of
2 signatures, or something like that?

3 A Because of the number of ^{white} tests that had been
4 performed.

5 Q So then did Mr. Boyd place these in his desk?

6 A Yes, he did.

7 Q And how long did they stay there?

8 A I don't the exact amount of time they did stay
9 there. I don't know exactly when they were removed.

10 Q Did you talk to the NRC inspector during that
11 inspection?

12 A On a few occasions, briefly.

13 Q Did he make inquiries that you were aware of
14 regarding the inventory cards or the sources?

15 A Not as far as I was concerned.

16 Q Do you know whether he ever reviewed those cards
17 in the course of his inspection?

18 A I assume he did. I assume he did.

19 Q And -- were the cards in the desk during his
20 entire inspection -- in Mr. Boyd's desk?

21 A I believe that they were, yes.

22 Q Do you know whether Mr. Fritz had any involvement
23 in this?

24 A I was not privy to any conversations that would
25 give me any information regarding that.

1 Q Did you ever subsequently talk with Prince Jason
2 about this event?

3 A Yes, later.

4 Q And what was discussed?

5 A This was in July, I believe of 1989 when I was
6 engaged in trying to convince the management to take a look
7 at -- you know, sort of audit the program.

8 Q Audit the radiation safety program at UC?

9 A Yes.

10 Q And what management were you talking with?

11 A I was talking with Dr. Wyatt.

12 Q And this was July 1988 - 1989?

13 A Yes, when I finally talked -- I think maybe it was
14 August, early August, I believe.

15 Q Of 1989?

16 A Yes, I think August 2, 3 or 4th. Something along
17 those lines. I met with Dr. Wyatt.

18 Q And was this one --

19 A And also prior to that I had talked to Dr.
20 Silverstine -- both me and Mr. Boyd had talked to Mr.
21 Silverstine.

22 Q And who is Mr. Silverstine?

23 A He is a nuclear medicine physician, an authorized
24 user and a member of the radiation safety committee.

25 Q It is my understanding that at that time Dr. Wyatt

1 was the chairman of the radiation safety committee?

2 A Yes, that is correct.

3 Q And you say -- did the RSO report directly to the
4 RSC -- Radiation Safety Committee?

5 A Well, you see, that's sort of strange. This is
6 just my understanding, was that, yes, the Radiation Safety
7 officer reported to the Committee and I guess, therefore,
8 the Committee chairman.

9 BY MS. FAHEY:

10 Q Let's get back to the question. In July of 1989
11 you had a conversation with Prince Jagan?

12 A I'm thinking it might have been early August.

13 Q Okay. And he discussed with you about the source
14 cards being put in the desk?

15 A Well, in actuality, I discussed with him that me
16 and Mr. Boyd and Mr. Harris had signed a statement that --
17 and turned that over to Dr. Wyatt regarding those sources
18 were unavailable for the inspector during that inspection
19 that we're talking about in 1988.

20 Q This is a memo that you prepared?

21 A Yes. In fact on your last visit you made a copy
22 of that, that memo, with our signature on it.

23 Q And --

24 A And that's when I discussed about the -- those
25 cards, and that Dr. Wyatt, I explained that Dr. Wyatt was

1 aware of that, and that Dr. Wyatt desired to have accurate
2 information about that from Mr. Jason. After that Mr. Jason
3 prepared a memo of his own and put it in an envelope that I
4 enclosed with some other material I turned over to Dr.
5 Wyatt, but I am not aware of the nature or wording of Mr.
6 Jason's memo to Dr. Wyatt. I don't have personal knowledge
7 of what is written in that memo.

8 Q Okay, so what you're saying, and correct me if I'm
9 wrong, is that you had no direct knowledge from Mr. Jason
10 about why he handed the source cards to Melvin Boyd?

11 A Well, no, he indicated to me when I was speaking,
12 when I was broaching the subject about that, that -- he
13 indicated to me at that time that he had been instructed by
14 Ken to do so.

15 Q Instructed to what?

16 A Have those cards unavailable for the inspection.
17 That was the gist of what he had said.

18 BY MR. PAUL:

19 Q That Jason had said?

20 A That's what Jason had said to me.

21 Q Was Wyatt aware of this incident before you told
22 him?

23 A No.

24 Q That was the first he --

25 A To the best of my knowledge, no, anyway.

1 Q At the time this occurred back in August of '88 --

2 A Are you talking about the inspection?

3 Q Yes, the inspection and the cards being given to
4 Melvin, did you have any knowledge of what the purpose --
5 why they were doing them?

6 A Why they were given to Melvin?

7 Q No one told me the exact motivation, no.

8 BY MS. FAHEY:

9 Q Did you know what sources the -- were for?

10 A Yes, I recognized that they were the Dr. Tan
11 sources. I did recognize that much, yes.

12 BY MR. PAUL:

13 Q You were knowledgeable at that point in time that
14 you had at least looked into the matter and that they were
15 missing.

16 A Yes, that they were under investigation. You
17 know, they had tried to find them.

18 Q Did you have an opinion as to why they were given
19 to Melvin?

20 A An opinion, yes.

21 Q Do you want to give it to us?

22 A Well, I would say that my opinion would be that
23 they were -- you know, since they had not been leak-tested
24 for, you know, a period of time, they probably would have
25 rather not, you know, have the inspector see that. That's

1 an assumption though, you know.

2 BY MS. FAHEY:

3 Q Does the fact that they weren't leak tested for a
4 period of time an NRC violation?

5 A Yes.

6 BY MR. PAUL:

7 Q What was the procedure and how often did you
8 perform leak tests?

9 A For beta, it was our common practice -- for beta
10 and gamma sources about a hundred microcuries in activity,
11 to leak test them every six months.

12 Q Was that procedure followed by the University?

13 A Generally, yes.

14 Q Would all these tests be documented on the
15 inventory card?

16 A Yes.

17 Q Were you ever asked to falsify an inventory card,
18 meaning to sign off a card when you had not performed a
19 test?

20 A Well, we never signed them, but do you mean, enter
21 the date on the card?

22 Q Correct.

23 A No, I was never encouraged to do that.

24 Q Do you know of any instances where it took place?

25 A Not personally, no.

1 Q Do you know whether it took place or not?

2 A I really have no knowledge as to that ever being
3 requested. I assume not.

4 BY MS. FAHEY:

5 Q When you spoke with Dan Gibbons during the NRC
6 inspection, did you, or are you aware of any of the other
7 techs letting him know that cards were missing out of the
8 pile of source cards?

9 A No, I don't believe that was brought up.

10 Q You didn't volunteer the information?

11 A No.

12 Q What was the nature of your conversations with Mr.
13 Gibbons?

14 A Very, very brief. We spent more time talking
15 about the weather because most of his time was spent with
16 Ken Fritz or other UC personnel. It was a very limited
17 scope.

18 Generally, the most contact I would have is when
19 Ken would need some information to give to Mr. Gibbons and
20 he didn't know where to locate it; he'd ask me to try to
21 locate the information and I would go to the files or
22 wherever the information was located and then bring it back
23 to the office.

24 I would say that 99 percent of Mr. Gibbons' time
25 was spent with management personnel.

1 Q So your presence was not required to be there?

2 A No, no.

3 Q In order to assist during the inspection or
4 anything of that nature?

5 A No, not at that particular inspection. I think I
6 spent a total of ten minutes with Mr. Gibbons -- 10-20
7 minutes in his presence.

8 Q You were encouraged to be absent during the
9 inspection?

10 A No one came out and said, you know, we'd like to
11 be -- you out of here, or you know, anything like that.

12 Q But -- you kind of leave that hanging. Were you
13 assigned certain duties that would guarantee that you were
14 not in the office?

15 A No, I was in the office most of the time. I was
16 in and around the office most of that period of time during
17 the inspection.

18 Q This was about a week long inspection?

19 A I believe it was three or four days. I'm not sure
20 of the exact time, but I believe it was three or four days.

21 BY MR. PAUL:

22 Q In June, specifically, there's a memo date June
23 30, 1988 from Alexander and Fritz to the radiation safety
24 techs. It's been referred to by other witnesses as a gag
25 order.

1 A Oh, yes.

2 Q Do you remember that?

3 A Yes, I do.

4 Q Can you just explain what the circumstances were
5 that - where this came about; why this thing was written?

6 A Well, I believe I know why it was written. I
7 believe the principal reason it was written was to basically
8 keep radiation safety office business internal to the
9 radiation safety office.

10 Partially, I would say, not to air our dirty
11 laundry, you know, out with the rest of the authorized
12 users, or if we had disagreements with the way things were
13 done, to limit us from talking to the other researchers.
14 That's what I believe it was for primarily.

15 Q Was there any specific event that precipitated
16 that particular memo?

17 A I can't pinpoint a particular event, no. You
18 know, I may personally have been responsible for it in my
19 behavior because many times, you know, if I had a problem
20 with a policy, or if I thought there was going to be a
21 better way of doing something, and I would be out doing like
22 lab surveys, I would say, you know, this is what they want
23 you to do in the office, but here is what the better way is,
24 you know.

25 Q You know, I imagine if that would get back to

1 management, they might -- it might displease them and that
2 might have been an motivation. I'm sure I wasn't the only
3 person that, you know, spoke outside of the office.

4 Q Was there a meeting over this memo?

5 A Yes, there was.

6 Q Who attended?

7 A Myself, -- I believe it was myself, Melvin Boyd, I
8 believe, -- I think he was here then -- Pat Harris, Ray
9 Estes, Carolyn Hurt and Ken Fritz and George Alexander.

10 Q Then, do you know who authored the memo? Was it
11 Alexander or Fritz?

12 A All I know is that -- well, I know for fact that
13 the memo had both person's names at the top of it.
14 Subsequent to that, I had heard Ken said that he -- that Ken
15 has said that George had authored it, you know, and that,
16 you know, he had just basically signed off on it.

17 Q Was Fritz there at the meeting?

18 A Yes.

19 Q What did they tell you about the order or about
20 what they wanted you to do?

21 A They told us to read it and sign it and then asked
22 us if we understood it?

23 Q Did you understand it?

24 A Well, I understood the language of it, yes. I
25 understood what the words said, yes. As to the ultimate

1 intent of it, I'm not positive I understand their motives
2 for that. I understood what the memo itself said.

3 Q Did it, in your opinion, interfere with your
4 ability to discuss safety concerns with the NRC?

5 A My personal feeling was -- this is my personal
6 feeling -- was that unless I would personally exhaust every
7 possible avenue within the University to get a certain
8 problem I might have corrected, that it would have been, at
9 that time, deleterious to my continued career to go to the
10 Nuclear Regulatory Commission.

11 Q So it did impact the way you felt.

12 A Well, not that particular memo, as much as just a
13 general -- you know, a general historical perspective I had.

14 Q Historical perspective of what, the radiation
15 safety program or the people involved?

16 A Well, no, no, previous NRC involvement that the
17 University had had over a particular individual who was
18 there prior to my ever starting there.

19 Q Is that (b)(7)(C) 6,7C

20 A Yes, that would be (b)(7)(C)

21 Q (b)(7)(C) went to the NRC; is that correct? Is that your
22 understanding of it?

23 A Well, I believe (b)(7)(C) communicated with them, yes. 6,7C

24 Q What happened to (b)(7)(C) as far as you know?

25 A Eventually, (b)(7)(C)

6,7C portions

1 Q Was it your feeling that (b)(7)(C) because
2 of this contacts with the NRC?

3 A Well, partially. Yes, I believe that that was
4 partially -- I believe that the management viewed that (b)(7)(C)
5 had gone outside of the chain of command and that (b)(7)(C) did not
6 adequately take to management, prior to going to the NRC.

7 Q Did you connect up that incident, the (b)(7)(C)
8 situation, with this memo at that time? 617

9 A In a way, yes. In a way, yes, to a limited
10 degree, in that when I was hired, mention was made of a
11 previous employee who hadn't taken (b)(7)(C) problems properly to
12 (b)(7)(C) management -- when I was hired -- when I was
13 interviewed, in fact.

14 BY MS. FAHEY:

15 Q Who mentioned it to you?

16 A It was George Alexander who mentioned that at the
17 time of my hiring. I had, you know, from being in the
18 business, was familiar with rumors regarding, you know, that
19 there had been trouble at UC with an employee. That had
20 been in the papers and whatnot.

21 I have to admit that I said that I understood, you
22 know, that -- you know, that you should take problems to
23 management prior to going to the Nuclear Regulatory
24 Commission.

25 BY MR. PAUL:

G. 7C Portions

1 Q Was it your opinion at that time that they looked
2 unfavorably about employees bring radiation safety concerns
3 to the NRC?

4 A At the time of my hire?

5 Q No, at the time of this memo.

6 A I had the feeling that they would definitely look
7 unfavorably at a person going to the Nuclear Regulatory
8 Commission with allegations or accusations, especially -- in
9 their opinions, they hadn't been properly run up through the
10 managements structure first. So, I should say, under those
11 conditions, yes.

12 BY MS. FAHEY:

13 Q At the time you had the meeting and you all signed
14 the gag orders, did anybody from the staff bring up the fact
15 that it's a violation of the NRC regulations?

16 A In fact, I mentioned myself -- was the only
17 individual that said anything, I believe. After it was
18 signed, I said, of course, you can't have this apply to us
19 communicating with the NRC; you know, I stated that; that,
20 you know, I did state that that couldn't apply to the NRC.

21 I did not also state at that time that I thought
22 it was wrong in the first place, but, you know, I did state,
23 you know, that it could not apply, you know, to the NRC.

24 Q What was the response?

25 A I believe that -- I believe it was George -- I

1 can't remember whether it was George or Ken mentioned that -
2 - they said, well, no, we're not telling you you can't talk
3 to the NRC, you know, along those lines. So, you know, I
4 had -- you know, there was that verbal -- you know, verbally
5 they -- you know, there was from management some, you know,
6 acknowledgement, or at least voicing, you know, that as long
7 as -- you know -- my feeling of it was that they meant, you
8 know, we can't restrict you from going to the NRC, but, you
9 know, we expect you to take it through management first.

10 You know, it leaves gray areas, but you know, I
11 did mention that and there was a comment made by, I believe
12 it was George; I'm not positive.

13 Q What is your opinion -- if you would have
14 contacted the NRC about some radiation safety concerns after
15 signing that gag order and had not gone to management --

16 A If I had not gone to management; what would I
17 believe would happen?

18 Q Yes.

19 A Oh, I believe I would have been written up for it.
20 They would have took some disciplinary action.

21 Q Fired possibly?

22 A I guess it's a possibility. It would have been
23 hard for them to fire me on one incident, you know. I might
24 have been reprimanded.

25 Q That's just a hypothetical.

1 A Yes, it's hypothetical.

2 Q But there was some fear in your mind after signing
3 that?

4 A Well, you see, I also personally believe that it's
5 the employee's right. I mean, it's an employee's
6 responsibility if you have a situation, to make management
7 aware of the situation. See, if they're not aware of the
8 situation, you know, then I'm not doing my duty if I don't
9 bring it to their attention; am I?

10 Management's best able to address problems, so I
11 personally believe that, you know -- in fact, it says it in
12 the regulations. I believe 10 CFR 19 -- I believe -- it
13 says that you're supposed to take these concerns to your
14 management. You know, the big gray areas in the regulations
15 is time lags, timeframes and things like that, you know.

16 BY MR. PAUL:

17 Q I mean, in talking with you and other people that
18 were involved with this memo, they called it a gag order; is
19 that correct?

20 A Yes, oh, yes, it's been referred to as that.

21 Q Why did you call it the gag order?

22 A Well, it told us that we couldn't talk to anybody
23 about radiation safety business outside of the office, and
24 that disciplinary action could be a result of such failure
25 to comply with that statement.

1 BY MS. FAHEY:

2 Q Isn't it true that in the past you and others
3 brought concerns to management about the radiation safety
4 office and nothing was done?

5 A That's true; that is true.

6 BY MR. PAUL:

7 Q Did you sign the order?

8 A Yes, every hourly employee in the office signed
9 that order.

10 Q Was it a requirement of your employment to sign?

11 A It wasn't; they didn't specifically say so.

12 Q What did they say?

13 A They said, "sign it!" They sign this; you
14 understand, sign it.

15 BY MS. FAHEY:

16 Q So nobody refused to sign; is what you're saying?

17 A No.

18 BY MR. PAUL:

19 Q When you signed it, did you have the opinion that
20 if you didn't sign it, there would be some type of action
21 taken against you?

22 A Oh, yes. I assumed that if I refused to follow a
23 direct management directive, that would at least, at the
24 very minimum, be reflected on my things like performance
25 evaluations and like that.

1 Q Okay, this memo is June 30, 1988. Now, the
2 incident with the inspector was early August, '88. Did that
3 have any influence on you as far as not letting the
4 inspector know that they had attempted to hide inventory
5 cards?

6 A That, along with other things. Truthfully, to a
7 certain degree, that; the fact they had made this statement
8 -- made us sign the statement or that they made that a
9 policy, and then just my general feeling about the
10 management at that time and the fact that I felt -- this is
11 an opinion -- that, you know, that they certainly would be
12 very angry, you know, in the middle of an inspection, I
13 said, here, look at these.

14 It would be, you know, -- I assume that would
15 anger, you know --

16 Q They wouldn't appoint you to the radiation safety
17 committee; would they?

18 A No.

19 BY MS. FAHEY:

20 Q How many NRC inspections have you been present
21 for?

22 A Two.

23 Q During the one previous to August of '88, was
24 there one that you were present for?

25 A Yes, I believe it was '86.

1 Q Did the NRC inspector sit down with each one of
2 the health physics techs and talk to you about concerns?

3 A No.

4 Q It was strictly a review of records and things of
5 that nature?

6 A I have to say that I'm used to the nuclear power
7 industry prior to this experience here, where there seems to
8 be a better amount of enforcement and inspection. Compared
9 to a nuclear power plant, the inspections we received were,
10 in my opinion -- this is only my opinion -- were negligible
11 --- the two that I was witness to, anyway.

12 Q Now, when you aware that there was going to be an
13 audit and inspection in August of '88, were the techs
14 anticipating that the inspector was going to find out some
15 of the serious concerns that you all had?

16 A We looked in the Health Physics Society -- they
17 have a directory. When we heard who the inspector -- the
18 name of the inspector, we looked up his credentials, and we
19 assumed that they would find lots of violations.

20 In fact, you know, Mr. Gibbons said something
21 like, well, is there anything -- talking with the
22 technicians -- is there anything I can address before I
23 leave, or something along those lines.

24 I think I mentioned, yes, should I get my resume
25 together, because I wasn't aware, you know, the nature of

1 his report. I assumed, you know, that a qualified
2 individual spending three or four days, would have come up
3 with more than eventually came out of it.

4 [Brief recess.]

5 MR. PAUL: Back on the record.

6 BY MR. PAUL:

7 Q I guess at the time we broke, we were discussing
8 -- still in the 1988 time frame of the NRC inspection in
9 August. At that time, did you have any concerns regarding
10 the effectiveness of the radiation safety program at the
11 University of Cincinnati Medical Center?

12 A What time are we speaking of?

13 Q In 1988.

14 A Yes.

15 Q What were those concerns?

16 A Certain practices, recordkeeping practices,
17 certain technical aspects.

18 Q Did you feel that these concerns affected
19 radiation safety?

20 A Well, yes.

21 Q Do you have any specifics -- what specifically?

22 BY MS. FAHEY:

23 Q Maybe the way you want to address it is
24 ultimately, you and some of the other health physics
25 technicians ultimately went to the Radiation Safety

1 Committee; isn't that true?

2 A Yes.

3 Q With your concerns. Maybe -- I think --

4 A Yes.

5 Q Was that a culmination kind of, of all your
6 concerns?

7 A Not of all our concerns.

8 Q Go ahead.

9 A That did contain some of our concerns. I had
10 other more, I guess you'd call it esoteric, you know,
11 concerns regarding some things like instrument calibration,
12 the type of sources that were used for calibration, the
13 method of instrument calibration, certain problems with the
14 way dosimetry was done. Let's see what the other burning
15 issues were for me -- training of radiological workers was
16 another one of my pet peeves.

17 BY MR. PAUL:

18 Q You wrote some memos on these; didn't you?

19 A Yes, I did.

20 Q Was it you that provided me with some
21 documentation last time?

22 A No, you just got that one. You just copied that
23 one, the one document from me. I don't know whether it was
24 me or whether Melvin or Ray Estes or Pat Harris you might
25 have talked to.

1 Q Did you write any memos regarding your safety
2 concerns that you just maintain on file that you didn't
3 submit to management ultimately?

4 A In my personal correspondence file, there were I
5 believe a few versions -- different versions of other
6 material that I eventually sent in memo form and there was,
7 you know, it's possible I had one or two that I had written
8 and hadn't put in that form or put, you know, delivered in
9 that form to management or the, you know, radiation safety
10 management. So yes, there was -- there was probably a
11 couple of items in my personal correspondence file which is
12 where I kept -- keep this material.

13 Q Regarding -- was there any more instances of
14 missing sources after the August, 1988 incident that you
15 were aware of?

16 A Not until much later was I aware that there was
17 other missing sources. That was a consequence of the NES
18 audit.

19 Q Maybe now we can go into that. What did you
20 become aware of as far as missing sources?

21 A I just became aware that they had not been able to
22 find the final disposition -- you know -- records of the
23 final disposition of several -- I don't know how many --
24 radioactive sources and that part of -- when it -- one of
25 NES' activities that were being conducted in conjunction

1 with their activities at the University were trying to find
2 correct dispositions of what happened to that material.

3 Q The missing sources -- do you know whether there
4 was a card in the file on that source?

5 A I believe that they identified -- I believe that
6 NES used some old cards that had gone out of use to identify
7 what they considered some unresolved records, yes.

8 Q Did -- after August of 1988, did -- was there any
9 change as far as recordkeeping on the inventory cards?

10 A No.

11 Q They were maintained by Prince Jason or in his --

12 A They weren't really maintained by him in
13 particular, no. They were there just out in the office and
14 we all had access. We all knew where the cards were.

15 Q When you performed a wipe test, did you take the
16 card into the field with you?

17 A Some people did. I didn't. Generally what I
18 would just do is I would write on a piece of paper, I'd just
19 make like a worksheet of where the material -- what room
20 they were located in, what building they were located in,
21 what the isotope was, and then I'd work from there but some
22 of the individuals did. Yeah, they would take a handful of
23 cards and they would go out and locate the sources that way.

24 Q What was George Alexander's title?

25 A It was administrative director of radiation

1 safety.

2 Q Did he have any direct line authority over your
3 department?

4 A Yes.

5 Q Who's boss? Was he Ken Fritz' supervisor?

6 A I was always told that they sort of operated on an
7 equal footing and that supposedly his realm was the
8 administrative realm and Ken's realm was supposed to be like
9 the technical realm.

10 Q Who did both of those individuals report to?

11 A I believe that Ken reported to the Committee. I'm
12 not sure if George reported directly to the Committee
13 because he also had another appointment at the University.

14 Q What was that?

15 A I believe it was administrative director of
16 nuclear medicine department.

17 Q So he had responsibilities in two separate
18 departments?

19 A Yes.

20 BY MS. FAHEY:

21 Q Did you consider that a conflict of interest?

22 A I personally did.

23 BY MR. PAUL:

24 Q Why?

25 A - Nuclear Medicine Department is one of the larger

1 users of material. Our job is to regulate the use of
2 material and I just felt that, you know, that radiation
3 safety office should be totally autonomous from control by
4 the users of material. That was just my understanding of
5 the concept. That may be an incorrect understanding. You
6 know, that's my concept however of radiation safety. We're
7 supposed to oversee those who use, not be overseen by those
8 who use.

9 Q Were you aware of any incidents where Alexander
10 interceded on nuclear medicine's behalf to override any
11 radiation safety controls?

12 A To over -- directly override? No. He made
13 comments and sometimes he'd make statements that I would,
14 you know, that I objected to but as far as actually using
15 his authority to that extent, as far as technical issues,
16 no. Now, as far as administrative issues, yes.

17 Q Did these administrative issues affect radiation
18 safety at all?

19 A Yes. I would say that from my personal viewpoint,
20 that you know, his thrust wasn't the -- his understanding of
21 radiation safety wasn't the same understanding I had and
22 therefore from the basis of my understanding, I would say
23 that yeah.

24 Q As a result of any of Alexander's directives, did
25 you ever violate any of UC's radiation safety procedures?

1 A No, not -- no. Not directly, no.

2 BY MS. FAHEY:

3 Q Were there inconsistencies between what the
4 nuclear medicine department was required to do and what
5 other departments were required to do as far as radiation
6 safety?

7 A There were certain things they weren't required to
8 do that other individual users or groups of users were
9 required to do, yes.

10 Q The reason for that was because of George
11 Alexander's involvement with the radiation safety office?

12 A I would -- that's a possibility. I can't deny
13 that it's potential that it could be because of the
14 different nature of the type of work they perform with
15 radioactive materials in that they deal with medicine
16 directly and the other groups deal with research, primarily.
17 That may have been their justification for holding them to a
18 different torch, you might say.

19 Q Okay, can you give an example of what kind of
20 things Nuclear Medicine was exempt from?

21 A Well, they didn't have -- they didn't inventory
22 all the materials they used because a lot of them were short
23 half-life materials perhaps but they weren't required to
24 inventory all their human use materials. Now, they did
25 submit inventories for their non-human-use materials but for

1 their human-use materials, they weren't required to submit
2 an inventory of their total usages. That would be one of
3 the principal items and of course because they did so much
4 work, they were allowed -- you know, if there's more
5 contamination in some of their areas, you know, they would
6 be looked at differently than someone using a longer half-
7 life isotope because I guess it was assumed that since the
8 half-lives were shorter that it wasn't as big a concern if
9 they have contamination in their areas to that degree as it
10 was some of the other areas.

11 Also, there was the issue of some of the
12 bathrooms, you know, that they use in their nuclear medicine
13 area.

14 BY MR. PAUL:

15 Q The decontamination issue?

16 A Oh, no. That was a different issue. I'm speaking
17 along the lines of some bathrooms that were used by both
18 patients and the public.

19 Q Oh, as far as -- well, it was the contamination
20 issue?

21 A It was a contamination issue, yeah. I thought you
22 said decontamination before.

23 Q I did.

24 A Okay. That's another issue that, you know, I felt
25 that it only benefitted nuclear medicine but you know, the

1 policy that the radiation safety committee adopted.

2 Q How many sealed sources did the University have
3 that were under your responsibility -- an estimate, if you
4 could?

5 A I'm just estimating. This is going to be a real
6 rough estimate. Individual sealed sources -- I would say a
7 couple hundred, give or take a lot. There's a -- there's a
8 -- I would say around a couple hundred.

9 Q Did every technician perform the wipe test?

10 A Yeah, I believe every technician in our office has
11 performed wipe tests.

12 Q So it's a continuing duty within the radiation
13 safety department?

14 A Yes.

15 BY MS. FAHEY:

16 Q How is it that you're scheduled to do certain wipe
17 tests? Is there a list of the sources and the dates they
18 need to be checked?

19 A They had general -- like they were doing -- they
20 had a few periods -- the every six month ones were due and
21 then someone would be assigned during that month to do the
22 wipe tests.

23 Q One person?

24 A One, sometimes two. I've done them both by myself
25 and in conjunction with others.

1 Q So, it's really only two time periods during the
2 year in which these are done certain.

3 A Yeah, because the alphas would coincide. We did
4 alpha -- actually the alphas were done four times a year but
5 for the beta gammas, they were done twice a year.

6 BY MR. PAUL:

7 Q In December, January time frame, 1988, 1989, did
8 you go before the radiation safety committee?

9 A Yes.

10 Q Did you have radiation safety concerns that you
11 addressed with them?

12 A Yeah, we turned over a list of memos that outlined
13 questions and concerns we have.

14 Q Did they involve administrative procedures or were
15 they real radiation safety concerns?

16 A Some of them were administrative in nature and
17 some of them were compliance concerns.

18 Q Did you address these concerns with Fritz prior to
19 going to the radiation safety committee?

20 A A number of them, yes, but not all of them.

21 Q Did Fritz make any attempt to resolve these
22 issues?

23 A Some of them were resolved, yes.

24 Q What happened to the other ones?

25 A Well, some of them were administrative in nature

1 and at that time, the Committee chose not to adopt some of
2 our suggestions.

3 Q What did you consider the radiation safety issues;
4 do you recall any specifics?

5 A Well, one of them would have been -- it's
6 administrative safety. It would have been -- was a memo
7 involving the commercial use of a license. I'm trying to
8 remember all those memos. There were so many that were
9 administrative in nature. Let's see. One involved -- well,
10 one involved -- there was discussion in the committee that
11 went along with the -- came up -- when we talk about the
12 commercial use of license which we wanted -- the technicians
13 wanted to dispose of all the radium 226 in the University
14 because we didn't feel that it was a good material to keep
15 around because it's you know, it's got some instabilities.
16 We -- that was broached, to dispose of the radium.

17 I can't remember whether we -- I think we touched
18 in the meeting on training, that it was the technicians'
19 wish that training be conducted more frequently. I'd have
20 to -- it's been a while since -- and so much water has gone
21 under that bridge, I'd have to have those memos to really
22 tell you any more.

23 Q Did -- why did you go to the Committee and not
24 through Fritz?

25 A I had basically given -- two reasons. One was, as

1 a result of a grievance that I filed concerning a policy
2 that the Committee adopted to have us decontaminate certain
3 spills of radioactive material, I filed a grievance that --
4 to oppose that change in our job descriptions to have us to
5 do that and as a result of that grievance -- in the body of
6 the grievance, I was informed that the radiation safety
7 committee was the policy-making body for the radiation
8 safety in the University and at that point, you know, I
9 figured well, you know, from now on, you know, if we can't
10 get anything done with Ken, then I'm going to go to
11 committee members.

12 Q So you weren't satisfied with Fritz' actions on
13 the issues?

14 A No, I was not.

15 Q Was Fritz aware that you were going to go to the
16 committee?

17 A He was aware that Dr. Wiot had called a special
18 meeting where the -- and the technicians were to -- and the
19 technicians were going to be there. He was aware of that
20 and we were told about the meeting and this was subsequent
21 to us filing for entry into the union and when the meeting
22 was called, we were -- we were told that you know, the
23 reason they called the meeting was they wanted to know if we
24 had any problems that would have caused us to want to join
25 the union.

1 Prior -- when we initially heard about the
2 meeting, we drafted those memos. We drafted as many memos
3 regarding areas of concern as we could prior to the meeting
4 and then when the meeting occurred, we passed out copies of
5 those memos to the radiation safety committee members that
6 were present.

7 Q Was Fritz in the meeting?

8 A No, he was not.

9 Q Was George Alexander at the meeting?

10 A He was.

11 Q I've looked through the issues. One of the issues
12 I didn't see that was addressed there was the issue of the
13 inventory cards being missing from the NRC inspection. Why
14 wasn't that brought up at the meeting?

15 A I believe that we didn't take any items to that
16 committee meeting that would have directly reflected on
17 individual acts or what we -- you know, by anybody. When we
18 talked about use of service license, we didn't mention any
19 individuals. We were just trying to address general
20 policies and also when we went into the meeting, we weren't
21 entirely sure of the purpose of the meeting. We were just
22 told there was going to be a meeting and that we were going
23 to be present.

24 We were prepared with some concerns and some
25 issues that we wanted to give to the committee but we didn't

1 feel at that time -- I don't think any of us were prepared
2 to attack any individual. We were mainly trying to hit
3 general -- more general policies and approach the situation
4 in a more generic fashion.

5 BY MS. FAHEY:

6 Q Can we back up for a minute here and talk about
7 the concern that you had about the commercial use of the
8 license. Can you explain in a little more detail what your
9 specific concern was?

10 A Well, actually I didn't really have that, that
11 aspect of it as a concern until we had received a phone call
12 from -- I forget his -- some gentlemen within the Nuclear
13 Regulatory Commission -- regarding a report that we had -- I
14 believe Jason had called to inform them that one of the
15 ~~wipe~~ ^{W.F. RUF} tests we were performing for a company called Deer
16 Iron had come apart and I guess he was returning the call on
17 that issue.

18 I can tell you he was talking to Mr. Jason and I
19 had done the initial counting and come up with the data --
20 the initial data on that wipe test. So Jason handed me the
21 phone to talk to the gentleman from the NRC.

22 Q Excuse me. You did the wipe test, or you did --

23 A No, I did the analysis. Wipe test was performed
24 by the vendor -- I mean, by the Deer Iron people. When I
25 talked to the NRC gentleman on the phone, he said, by the

1 way, do you have a provision in your license to provide this
2 service? And I said to the gentleman, I said, well that's
3 something I really don't know and I really can't address.
4 Would you like to speak to Mr. Fritz, the Radiation Safety
5 Officer?

6 He said, no, no, just mention it to him. Mention
7 to him that I asked about it, was all he said.

8 Q Do you remember who you spoke to at the NRC?

9 A I don't remember the gentleman's name, but it was
10 involving Deer Iron, and they're a radiography company, so I
11 don't know whether it was someone who specializes in
12 radiography work or whether it's just general inspection, or
13 what. I really don't know.

14 BY MR. PAUL:

15 Q Was it a region three guy or --

16 A Yes. Because Deer Iron is located in Dayton, I
17 believe, so it would have been a Region III gentleman. And
18 then after that, after I hung up the phone, I went and told
19 Ken, I said, Ken, this gentleman from the NRC told me to
20 mention to you that, you know, basically, what he said. It
21 was asking whether or not we were approved to provide that
22 service.

23 And Ken just sort of -- I can't remember his exact
24 words, but he, I think he said, well, we'll have to look
25 into that, or something along those lines, and that was the

1 end of it. That, however, got me started thinking. I later
2 did some research, you know, just looking through the
3 applicable section of the Code of Federal Regulations
4 regarding the fee schedules, and what not and as a result of
5 that the memo that eventually made its way to the committee.
6 That's how that eventually made its way to the committee.
7 Prior to that, you know, being in the nuclear power
8 industry, I really have to say that licensing issues and
9 what not aren't the concern of a senior health physic
10 technician, very much. You're more concerned with the
11 standard activities and those items are handled by
12 management personnel.

13 BY MS. FAHEY:

14 Q What about the source calibration that was being
15 done, using your department?

16 A You mean the calibration of sources, or, source
17 calibration?

18 Q Yes, that you did sources that were calibrated for
19 other facilities, other licenses --

20 A Oh, you mean instruments.

21 Q Instruments.

22 A Well, that was an activity that we didn't really
23 particularly address that in the committee meeting because
24 we viewed that as a -- more of a private thing of a couple
25 of individuals and not an activity of our office, per se.

1 I was mainly addressing -- in our memo, in our
2 discussions, we were mainly addressing the wipe testing of
3 sealed sources and what not that were routed in a regular
4 fashion into our office, and that the technicians actually,
5 you know, would routinely perform the work on, where most of
6 the instruments that were done -- ninety-nine point nine
7 percent of the time or ninety-nine percent of the time those
8 instruments that were calibrated for areas outside of UC
9 were not done by the technical staff.

10 Q Who does that?

11 A Ken Fritz.

12 Q And did he go to all these other facilities?

13 A I'm not sure. I really don't know.

14 Q What I'm getting at here, is this a private
15 business that Mr. Fritz was running on the side, using the
16 NRC, or Cincinnati or --

17 A It was my understanding that that was the case.

18 Q Would you know whether the money came -- was
19 reimbursed to the University's Radiation Safety --

20 A I have no specific knowledge of that. I really
21 don't.

22 Q What about when you did the wipe test for Deer
23 Iron, or whatever the name --

24 A The wipe tests for Deer Iron and the wipe test for
25 other companies were billed, paid to the University.

1 Q And you have direct knowledge of that?

2 A I've seen the bills. I've seen the data, I've
3 signed the data. I saw the invoices.

4 Q Okay. But you're not aware of ever seeing the
5 instrument calibration bills, going out, or coming back in?

6 A Never. Never had any knowledge of how that was
7 paid for, if it was paid for, how it was paid for. I have
8 no knowledge at all, no real information.

9 Q But you are aware of some isolated incidents where
10 the University employees, meaning yourself and other techs,
11 performed some of those instrument calibrations?

12 A Yes, on rare occasions --

13 Q Whose direction did you do that in?

14 A Well, once I did one for Dr. Carriocis. ^{cup} Ke lian PA S

15 BY MR. PAUL:

16 Q Who is he?

17 A He was a member of the Radiation Safety Committee
18 and he is, I believe the Director -- I'm not sure this is
19 his correct title, but the Director of Radiological
20 Sciences.

21 Q Did he have commercial interests with Fritz?

22 A I don't know for sure.

23 BY MS. FAHEY:

24 Q Do you remember what facility it was that you
25 calibrated?

1 A I believe it was Good Sam Hospital.

2 Q Did you think that that was unusual for them to be
3 using the University's equipment to do that?

4 A I had some difficulty -- you know, I had some,
5 just basic difficulty with it, but as far as -- that wasn't
6 really my biggest concern. My biggest concern was that the
7 work was done correctly.

8 BY MR. PAUL:

9 Q Did you bring all these details up to the
10 Radiation Safety Committee?

11 A No.

12 Q Why not?

13 A Because it was my belief that several members, at
14 least a few members on the committee, and at least one I'm
15 sure of, was engaged in those type of activities and I
16 didn't know whether it was University policy or not
17 University policy and I didn't want to really, I basically
18 didn't want to put my foot on it -- put my foot in my mouth
19 basically, by saying, oh, this is terrible, this is terrible
20 and then someone could come around and say, well perhaps
21 that this is allowed for people with the University,
22 providing consultatory services as part of their, you know,
23 the professors' union, or whatever.

24 I had personal feelings about what was done and
25 the way it was done, but I had no knowledge as to whether it

1 was against University policy or not and I considered more
2 issues that were more in my scope of knowledge.

3 BY MS. FAHEY:

4 Q Do you know if Mr. Fritz did this calibration of
5 instruments during his work time or if he came in after
6 hours?

7 A No, he did them during work time.

8 Q When you or any of the other techs were asked to
9 do it were you paid to do it on the side, outside?

10 A Whenever I had done them, which was very few
11 occasions, it was done just during my hourly schedule.

12 BY MR. PAUL:

13 Q Was it assigned for you to perform by Fritz?

14 A No, Ken would never ask me to do things like that,
15 and the only occasion that I can think of that I performed
16 such an activity was when Dr. ^{KUAKAS RUP} Carri~~ois~~ called me and asked
17 me to take care of it for him because Ken wasn't -- he
18 called and asked for Ken and Ken was out and he said
19 something equivalent to well, I need to get these done, and
20 since it's -- and my feeling was, since they need the
21 equipment to detect wherever they're being used for exposure
22 to radioactivity, that you know, I could put my personal
23 qualms about that, because it's better for them to have a
24 meter to detect radiation than not to have a meter to detect
25 radiation and that if they were going to be without a meter

1 for a day or two, then it was more important for them to
2 have the meter from my standpoint.

3 Q You knew at the time ^{KERIAKAS RUP} Carriocis asked you this that
4 it was not a UC meter?

5 A I assumed it wasn't, yes. And when I picked up
6 the meter from his office, I later saw that it had Good Sam
7 Hospital marked on it.

8 BY MS. FAHEY:

9 Q Did you fill out all the paper work?

10 A I made a calibration sheet on it and I put that in
11 with the rest of the records. I believe I made a copy of
12 the calibration sheet and gave it to Dr. ^{KERIAKAS RUP} Carriocis.

13 Q Did you fill out a sticker on the meter itself --
14 instrument -- indicating when it was calibrated?

15 A No, I did not. I gave the -- well, I may have --
16 I'm not positive on that, to tell you the truth. It was my
17 general practice, would have been to initial it and date the
18 calibration. But I don't know if I did that on that
19 particular meter since it was for Dr. ^{KERIAKAS RUP} Carriocis. I'm not
20 really sure whether I did or not. I may have.

21 Q You usually put your name, though, that you were -
22 -

23 A Yes, when I calibrate instruments I would
24 generally put a sticker saying that I did it, put my
25 initials on it, the day and when the date -- when it was due

1 for calibration.

2 BY MR. PAUL:

3 Q Did other techs perform the same services for
4 either Carriocis or Fritz, commercial-type activities?

5 A They may have had occasion to calibrate some
6 instruments for them. I'm not sure whether or not it
7 definitely happened. I assume that it might have happened
8 on one or two occasions. Principally though, it seemed
9 principally that Ken would do those, the calibrations.

10 Q Do you recall an incident -- I believe it's the
11 same time frame as the -- when you went before the Radiation
12 Safety Committee -- Fritz was interested in knowing who had
13 made some allegations to the NRC?

14 A Yes.

15 Q What do you know? Could you give us some
16 specifics?

17 A It's sort of sketchy. I'm trying to remember how
18 it was put -- we were informed that someone had made
19 allegations.

20 BY MS. FAHEY:

21 Q By phone?

22 A By phone, and that because of a phone log, they
23 suspected a phone that me and Mr. Boyd shared, Okay. And I
24 had heard from Melvin -- someone had told him or he had
25 heard -- that whoever had talked to Ken from the NRC had

6, 7C

1 said that -- identified the individual as someone who
2 sounded (██████████) Okay. That's what I heard. I didn't
3 directly hear that from Ken. I heard that via Melvin and
4 also I had heard that me and Melvin initially were the ones
5 suspected of placing the call because of that phone log and
6 that -- but that we tried to explain to them that on that
7 date we had called the NRC for the Form 3 maps, the
8 postings, and that that was what that call was about.

9 BY MR. PAUL:

10 Q Did he believe you?

11 A I don't know. I wrote a statement. I wrote a
12 memo. I'm trying to think if it was to Dr. Wyatt or who,
13 where I said that I didn't believe that anybody in our
14 office -- that I knew I hadn't done it, that I hadn't called
15 the NRC, and that as far as I knew, as far as I personally
16 knew, I had no knowledge of any of the individuals in the
17 office making that call.

18 Q But it was Fritz who was the one that made the
19 inquiry of you, whether you told the NRC?

20 A I remember him talking about it. It wasn't like
21 he grilled me. In fact, I asked him. I think I -- when I
22 had heard about it I asked him about it. When I heard from
23 Melvin about it I think I confronted him and said well, you
24 know, it wasn't me. I didn't do this. And I said, if I was
25 -- before I do that I would have brought it to you. And he

1 11 Returns

1 said, hey, you know.

2 Q So he --

3 A I told him what I would do is, I'd tell him I was
4 going to call the NRC. That's what I told him.

5 Q Was any action taken against you and Melvin over
6 the incident?

7 A No. Not that I can put my finger on. Nothing,
8 really. The only -- and as far as anybody else on the
9 committee -- no, there was no action taken.

10 BY MS. FAHEY:

11 Q Did it cause you any concern that an anonymous
12 call to the NRC would no longer be anonymous?

13 A Yeah, well yeah --

14 Q Were you concerned that somebody at the NRC would
15 front out the witness?

16 A Well, yeah. I know Melvin was highly upset. I
17 thought it was not right. Because if you can't -- my
18 feeling was, if you had a sensitive issue and you wanted to
19 get information from the promulgators of that policy, and
20 every time you were going to call to get information on your
21 own without going through your management and getting their
22 line on it, and the NRC was going to basically turn you into
23 your management, then what the heck's going on?

24 I heard it said that that's what was said. I
25 believe that's what was said, but in the same nature I can

1 hardly believe that anyone would say that. But that's the
2 scuttlebut and I was upset because of that and the fact that
3 I was suspected and it was like no one would directly come
4 up to me and say anything. I had to go to them and say,
5 "hey".

6 But I also upset that supposedly that is operating
7 in the best interests of safety would do something to make
8 that information flow that could be crucial to safety
9 questionable -- you know, put it all at risk, especially
10 considering the fact that everybody in the Region III that's
11 been there for awhile, from my understandings of it, should
12 have known about the past history of the place enough that
13 they should know that they can't be -- I'm referring back to
14 the ~~(REDACTED)~~ thing, that -- I mean, it just seems like real
15 impropriety on -- but that's just my opinion.

16 Q As a result of your meeting with the Radiation
17 Safety Committee, was there any action taken by them or the
18 RSO to remedy the concerns you had?

19 A Well, yes, they did finally dispose of the radium,
20 the higher activity radium sources and only kept a few as
21 counting standards. They rejected a -- they did address
22 some of the administrative areas of concern. They didn't
23 address some of the items like, we suggested a lab hazard
24 classification system and they didn't think that was useful.
25 So they did act on a few of the issues.

1 Q I guess that would bring us to, in August of last
2 year, 1989, you brought up the issue of the inventory cards.
3 What caused you to bring that issue up? I believe you
4 earlier said it was to Dr. Wyatt. Is that --

5 A Well, yes. You see, in August it was Dr. Wyatt.
6 But previously I had, we had talked to that Dr. Silverstine,
7 me and Mr. Boyd had talked to Mr. Silverstine.

8 Q When was that?

9 A It was in July, in the previous month.

10 Q And why did you talk to him, and what was it --

11 A Well, to be truthful, okay, Mr. Estes had filed a
12 labor suit, okay, and some of the material he took to the
13 DOL, they directed him to take the -- they said, this is not
14 in our jurisdiction, (

15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED])

21 And I wanted to try to prevail upon individuals
22 within the committee to -- that it would be the thing to do
23 was for the University to go the Nuclear Regulatory
24 Commission and say, listen, we understand we've got
25 problems, but we want to meet you half way, and we want to

1 get things fixed.

2 So I contacted -- well actually, Melvin Boyd
3 phoned Dr. Silverstine and said we wanted to discuss some
4 issues with him and we later met with him on a couple of
5 occasions. One was just to inform him of our feeling for
6 the nature of the problem. He directed us to gather
7 material together to try to document and prove our point,
8 because he knows the way the state is, that you have to have
9 just cause for taking certain actions against individuals,
10 with the University, and also to make major changes, it
11 would take -- we would have to show them the need for those
12 changes.

13 During the first meeting we informed him of the
14 fact that those records that we discussed earlier had been
15 made -- that were unavailable for the inspector and he
16 wanted us to document that and he also wanted us to document
17 everything else that we felt was wrong. So we -- the three
18 of us individuals signed a letter that you have a copy of.

19 BY MR. PAUL:

20 Q That was yourself, Melvin --

21 A And Pat Harris.

22 Q And Pat Harris.

23 A And we gave him that letter and also we gave him a
24 breakdown of us reviewing the license and the regulations
25 where we thought we needed improvement. Then he sent that

1 back to us and said, no, he wanted a separate documented
2 file on each area. He wanted it very well documented. He
3 didn't feel we had documented adequately.

4 It was shortly after that that I really felt that
5 Dr. Silverstine didn't understand the time constraints that
6 the University was under and it was eventually decided --
7 well I eventually decided, to be truthful -- to go to Dr.
8 Wyatt, the chairman of the committee and basically tell him
9 that either that certain things were going to be done or I
10 was leaving, and I went into his office with my resignation
11 in my hand.

12 Q When was this?

13 A ^s August 2, 3 or 4th. I met with him, I think it
14 was the second. I'm not sure though. It could have been
15 the third or the fourth. And I sat and had a lengthy
16 conversation with him, explaining my feeling for the
17 problems and he explained to me that well, they needed
18 something to go on, basically.

19 And I told him, I said, well, if I had a statement
20 from Jason about these missing records, that Ken had told
21 him to give those to us, then would that be sufficient to
22 start the procedure to get the problems corrected at the
23 University. He informed me that that would be adequate.

24 I left his office. I went into our office. I got
25 with the technicians and told them that I wanted them to

1 make copies of the license and applicable regulations
2 because we might wanted to review them, because we wanted to
3 recompile this material for Dr. Wyatt to show him, basically
4 lay out to him the nature of -- the general nature of the
5 problem with the Radiation Safety program. And then I asked
6 Mr. Jason to speak with me privately back in Ken's office.
7 Ken was on vacation at that time and I had a discussion with
8 Jason about those cards.

9 And -- I don't know if you want me to elaborate
10 any further on that or --

11 Q Yes.

12 A Well, basically what transpired there was -- I
13 told him that I assumed that Ken had told him to do that and
14 he said that yes, that was the case, that Ken had instructed
15 him to basically make those cards disappear before the
16 inspection and that -- I also told Jason that we -- that we
17 had already told Dr. Wyatt about our part in that and given
18 him a copy of that signed memo and that -- I told him that I
19 felt Dr. Wyatt was interested in the truth in that matter
20 and that it would be best coming from him.

21 And then he immediately after that went to the
22 typewriter and formulated a memo to Dr. Wyatt and he agreed
23 one hundred percent with me that, yes, that was the thing to
24 do. And that started this whole thing rolling.

25 Q When you met with Wyatt, was it just yourself

1 there and Wyatt?

2 A Yes.

3 Q Did you document that meeting?

4 A Well, I referred to it and when we handed over the
5 packet of information to Dr. Wyatt the next day, where we
6 enclosed the information that Melvin had in an envelope, we
7 put in with our envelope, marked confidential on both of
8 them and took them to Dr. Wyatt's secretary because he was
9 out of the office at the time.

10 Yes, I believe on the cover letter of that that
11 explained what we were handing him, I said, per our
12 conversation type thing.

13 Q Do you still have those documents?

14 A I'll have to see if I have a copy of that.

15 Q That's one thing I don't have a copy of.

16 A I'll have to check, because, you know, once all
17 this happened, you know, and management started the process
18 to eventually audit our department, to have our department
19 audited, there was a time where they took all records and
20 files and everything and they put them in this big -- what
21 used to be our calibration facility, and we're still trying
22 to get those records sorted out.

23 So, you know, I don't know for sure whether they
24 can find it our not, but I may be able to.

25 Q Would you mind looking for us?

1 A No, I will do that.

2 Q Could I get a copy if you find them?

3 A [No response.]

4 Q Was it subsequent to that that they hired NES.

5 A Well, in my conversation with Dr. Wyatt, I
6 suggested that the thing to do would be to hire an outside
7 consultant firm to come in, a professional consultant firm
8 to come in and audit the program, you know. That's really
9 all I was asking for, because I was certain that if they
10 brought in a outside consultant, you know, that they would
11 be -- they would generate a report which would raise
12 everybody's eyebrows as to the real nature of the problem.
13 Indeed, that happened.

14 Apparently, Dr. Wyatt contacted the president of
15 the University -- this is what I assume -- and got clearance
16 to contact the Nuclear Regulatory Commission, which I
17 understand he did, and he asked for, apparently asked for
18 the name of a consultant.

19 As a result, we hopefully are on the road to
20 recovery.

21 MR. PAUL: Can we go off the record here?

22 [Discussion off the record.]

23 MR. PAUL: Mr. Barbro, have I or any other NRC
24 representative here threatened you in any manner or offered
25 you any rewards in return for this statement?

1 THE WITNESS: Oh, no, none at all.

2 MR. PAUL: Have you given this statement freely
3 and voluntarily?

4 THE WITNESS: Yes, I have.

5 MR. PAUL: Is there anything further you care to
6 add for the record?

7 THE WITNESS: Nothing I can think of right now.

8 MR. PAUL: If something comes up later, you have
9 our card or you can reach us through your attorney. I would
10 appreciate it if you could locate those documents regarding
11 your meetings with Wyatt in August of '89.

12 THE WITNESS: Okay, I'll try to do that.

13 MR. PAUL: If I could get copies, I would
14 appreciate it.

15 THE WITNESS: Okay.

16 MR. PAUL: The interview is concluded; thank you
17 for your time.

18 THE WITNESS: Thank you.

19 [Whereupon, at 3:56 p.m., the interview was
20 concluded.]

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22

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REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission

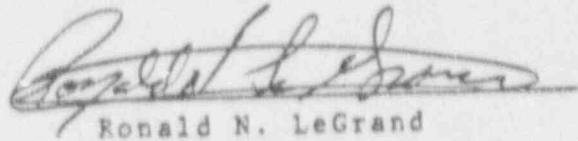
in the matter of:

NAME OF PROCEEDING: Investigative Interview

DOCKET NUMBER:

PLACE OF PROCEEDING: Cincinnati, Ohio

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.



Ronald N. LeGrand

Official Reporter
Ann Riley & Associates, Ltd.