

ORIGINAL

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: Investigative Interview of  
Melvin L. Boyd (CLOSED)

Docket No.

LOCATION: Cincinnati, Ohio

DATE: February 21, 1990

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EXHIBIT 11

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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 Melvin L. Boyd :

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 21th, 1990

18  
19 The above-entitled matter commenced at 9:07

20 o'clock a.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

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## P R O C E E D I N G S

[9:07 a.m.]

MR. PAUL: For the record, this is an interview of Melvin L. Boyd, spelled B-o-y-d, who is employed by the University of Cincinnati, the Medical Center. The location of this interview is Cincinnati, Ohio. Present at this interview, in addition to Mr. Boyd, are Peter Cassady, Peg Fiorino with the law firm of Beckman & Wheel. The subject matter of this interview concerns the University of Cincinnati Medical Center, Cincinnati, Ohio.

Mr. Boyd, please stand and raise your right hand.  
Whereupon,

MELVIN L. BOYD,

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

## EXAMINATION

BY MR. PAUL:

Q Mr. Boyd, are Mr. Cassady and Ms. Fiorino your personal representatives in this matter?

A Yes.

A And do you understand that they also represent other parties in this matter?

A Yes.

MR. PAUL: Mr. Cassady, could you just identify what other parties you represent here?

1 MR. CASSADY: Jeff Barbro, Pat Harris, Ray Estes,  
2 Prince Jarmon, and Melvin Boyd.

3 BY MR. PAUL:

4 Q With the understanding that he also represents  
5 other parties, do you wish to have him here at the  
6 interview?

7 A Yes.

8 Q Okay.

9 Mr. Boyd, what's your background in health  
10 physics?

11 MR. CASSADY: Before we proceed, could I once  
12 again go on the record and say that it's my understanding  
13 that Mr. Boyd is not a target of these investigations but is  
14 being interviewed as a witness?

15 MR. PAUL: Yes.

16 MR. CASSADY: Yes, that's true?

17 MR. PAUL: Right.

18 MR. CASSADY: Okay.

19 BY MR. PAUL:

20 Q Mr. Boyd's what's your background in health  
21 physics?

22 A I graduated in May of '87 from Purdue University  
23 with a BSCH, Bachelor of Science and Environmental Health, a  
24 major in health physics, and I have previous experience  
25 working in the Radiation Safety Office while I was a student

1 at Purdue University.

2 Q And as far as experience in the health physics  
3 field, what experience did you have?

4 A Well, as part of the curriculum there, that you  
5 work at least 20 hours a semester in the Radiation Safety  
6 Office at the University. We are also required to do an  
7 internship.

8 Q When did you go to the University of Cincinnati  
9 Medical Center?

10 A May, 1988.

11 Q And in what position did you go in?

12 A Staff Health Physics Technician.

13 Q And at the time you were hired, who was the  
14 radiation safety officer?

15 A Ken Fritz.

16 Q And was there an assistant or deputy radiation  
17 safety officer at that time?

18 A Yes and no.

19 Q Could you just explain a little bit what the  
20 situation was there as far as the position. I believe it  
21 was Prince Jason was there?

22 A Well, he was a Senior Health Physics  
23 Technician/Deputy Radiation Safety Officer.

24 Q Did he have any managerial function at that time?

25 A Yes. He was responsible for supervising the three

1 health physics technicians and the secretary.

2 Q And at that time, who were the three health  
3 physics technicians?

4 A Patrick Harris, Ray Estes, Jeff Barbro.

5 Q Who is George Alexander?

6 A He was the Administrative Director of the  
7 Radiation Safety Office.

8 Q Did he have any managerial responsibilities over  
9 you?

10 A Yes.

11 Q And in -- what was the actual chain of command in  
12 health physics -- the Radiation Safety Office? How did  
13 George Alexander fit into it?

14 A Well, Ken Fritz was the Technical Director and  
15 George Alexander was the Administrative Director.

16 Q Did Fritz report to Alexander or was it the other  
17 way around?

18 A I don't know.

19 Q Did Alexander direct any of your day-to-day  
20 activities?

21 A No.

22 Q Who directed your day-to-day activities?

23 A Ken Fritz.

24 Q In, I believe it was June of 1988, do you recall a  
25 meeting you had with George Alexander and Ken Fritz

1       regarding what we termed in our last interview as a "gag  
2       order"?

3           A       Yes.

4           Q       Could you briefly -- or could you explain what the  
5       circumstances were that brought about the meeting and what  
6       transpired at the meeting?

7           A       Well, all I can recall is he came in and said he  
8       wanted to have a meeting with all of the technicians.

9           Q       And who was this?

10          A       George Alexander. And we proceeded back to Ken's  
11       office, and we went over personnel policy, dress code, and  
12       then he gave us what you considered a gag order. You know,  
13       he just gave us all forms, and he passed them all around,  
14       and everyone read them, and we signed them.

15          Q       Did the technicians term it a "gag order"?

16          A       Pardon me?

17          Q       Did the technicians use the term "gag order" in  
18       describing it?

19          A       No, not that I remember.

20          Q       Has it ever been termed a "gag order" as far as  
21       you know?

22          A       Not before recently, no.

23          Q       Well, when we interviewed you last time, didn't  
24       you use that term?

25          A       Yes. That's because that's the way it was termed

1 in the audit report, and a lot of individuals have referred  
2 to it as a "gag order."

3 Q What did you -- did you read the memo at that time

4 --

5 A Yes.

6 Q -- that was passed around?

7 A Uh-huh. Yes, I did.

8 Q And what do you recall that it stated in that?

9 A It just basically told us not to go outside at the  
10 University, do not discuss any problems that you may be --  
11 that the Radiation Safety Program may be having with friends  
12 or relatives or no one that's not affiliated with the  
13 Radiation Safety Office.

14 Q Were you familiar with what brought this situation  
15 up as far as them writing a memo? Was there any past  
16 incident that initiated this memo that you were aware of?

17 A At that time, no, but afterwards, yes.

18 Q And what did you find out afterwards?

19 A Well, it was -- from the past experience they had  
20 had with a former employee.

21 Q And who was the employee?

22 A ~~(REDACTED)~~ L. J. C.

23 Q And what was the past -- were you aware of the  
24 circumstances of what the past events were regarding that  
25 employee?

L. J. C. Henderson

1 A No.

2 Q Did they mention (b) name?

3 A No, they didn't.

4 Q How did you find out that it involved this  
5 employee?

6 A Just from individuals in the office talking about  
7 it.

8 Q Did it have anything to do with the NRC?

9 A Pardon me?

10 Q Did it have anything to do with the NRC, (b)  
11 (b) incident?

12 A Yes.

13 Q And do you know what the circumstances were  
14 between (b) and the NRC?

15 A No.

16 Q At the meeting, when you read the memorandum, did  
17 you consider that this memorandum had any effect on your  
18 ability to discuss safety concerns with the NRC?

19 A Not really. I didn't really pay it any attention.

20 Q Did you sign it?

21 A Yes.

22 Q And why did you sign it?

23 A Because when he came in, and when we were in the  
24 meeting, he just said sign it, and one of the technicians  
25 had specifically pointed out that it was a violation of

*6,7C returns*

1 19.12, and, you know, of Form 3, the notice to employees,  
2 but I signed it anyway.

3 Q And you said "He." Who was he who told you the  
4 information?

5 A Well, I was aware of the information.

6 Q No, I mean you said, "He told us to sign it." I'm  
7 just asking who he was.

8 A Oh. George Alexander.

9 Q Was Fritz at the meeting?

10 A Yes.

11 Q Did he say anything about the memo?

12 A No.

13 Q You mentioned you termed some sections. Now,  
14 these were sections of the NRC Regulations. Is that right?

15 A Yes.

16 Q And what does that particular section of the Code  
17 of Federal Regulations pertain to that you cited. You  
18 cited the number; do you know what that pertains to?

19 A Yes. Okay. Form 3. It specifically states that  
20 an employer cannot take action against an employee for  
21 notifying the NRC of safety problems.

22 Q Okay. So, evidently, you didn't consider this  
23 memo complying to the Code of Federal Regulations, did you,  
24 as far as your freedom to -- is that what you said earlier?  
25 -- as far as your freedom to contact the NRC? You didn't

1 equate that with this memo at that time?

2 A Yes.

3 Q Oh, you did?

4 A Yes.

5 Q But why, then, did you sign the memo?

6 A Because we were -- I was ordered to sign it.

7 George Alexander specifically said sign it.

8 Q Did you feel it was a condition of your employment  
9 to sign it?

10 A Yes, because at that time in that meeting, I was -  
11 - had just -- I wasn't there even a month. I had just  
12 recently started there at the Radiation Safety Office.

13 BY MS. FAHEY:

14 Q When one of the technicians brought up the fact  
15 that the requirement to sign this memo was a violation, what  
16 was the response from the management representatives there?

17 A Well, George just said, "Just sign it." Ken  
18 didn't say anything. He just sat there in his chair.

19 Q Did everybody sign it?

20 A Yes.

21 BY MR. PAUL:

22 Q At that time, were you the newest employee at the  
23 meeting?

24 A Yes.

25 Q After the meeting, did you have discussions with

1 the other technicians on the memo?

2 A Yes.

3 Q And what was the substance of those discussions  
4 about regarding the memo?

5 A We thought it was funny, to be honest with you,  
6 because, you know, I was very well aware of my rights, and  
7 that if I chose to call the Nuclear Regulatory Commission  
8 that, as a radiation worker, I have that authority to  
9 contact the Nuclear Regulatory Commission if, after I take  
10 safety issues to management, and if I feel that they are not  
11 responding in a timely manner, that I had, you know, an  
12 obligation to contact the Nuclear Regulatory Commission.

13 Q So you were not -- this in no way coerced you or  
14 prevented you from going to the NRC with any safety concern?  
15 My understand of what you said, is that correct?

16 A Correct.

17 Q Did any of the other radiation safety techs  
18 indicate that they were intimidated by the memo where it  
19 would effect their ability to go to the NRC?

20 A I can't really answer that.

21 Q Well, I'm just asking if they mentioned anything,  
22 that they felt that they no longer could, or this somehow  
23 infringed on their rights to go the NRC?

24 A Not that I can recall.

25 Q Regarding the inventory of sealed sources and the

1 periodic wipe test, did you perform those in that Summer of  
2 '88? Was that one of your assigned duties?

3 A Yes.

4 Q And did the University have any written procedures  
5 for you to follow in performing the inventory and wipe test?

6 A No.

7 Q When you first got there, was there any type of  
8 training as far as this procedure?

9 A No.

10 Q Were you just -- how did you come about doing it?  
11 Did they just give you a card and you went out in the field  
12 to perform it?

13 A Basically. And Ken had -- you know, he use to  
14 tell me a lot, that he said, "Well, you know, you went to  
15 school for health physics, and -- if I didn't know how to do  
16 something, I would go to the library or I would look in my  
17 reference books and see what's the preferred methodology of  
18 performing that certain task.

19 Q Did all the technicians perform these wipe tests?

20 A Yes.

21 Q Was everyone doing it in a different method, or  
22 was there some standardized method that was used?

23 A It all depended on the type of source.

24 Q So you were left to your own initiative as to how  
25 you'd perform this. Is that --

1           A     No. As far as the gammas and the betas, it was  
2 standard operating procedure the way all of us performed  
3 them, but when it came to some of the radium sources, there  
4 was a little discrepancy, because since there was -- there  
5 was not any written procedures.

6           Q     What was the discrepancy as far as radium was  
7 concerned?

8           A     Well, Radium 226 is an alpha and a gamma, and you  
9 can count it either way. There are a lot of different  
10 methods in which you can count Radium 226, and sometimes  
11 they would be counted in the gamma counter, and then other  
12 times they would be counted in the proportional counter.

13           BY MS. FAHEY:

14           Q     What's the proper way to do it?

15           A     It all depends on the way your procedure is  
16 written. Most individuals -- if you're using it for a gamma  
17 standard, it should be counted gamma, but if you're using it  
18 for an alpha standard, it should be counted alpha. The  
19 NIST, National Institute of Standards and Technology,  
20 preferred method is to count it gamma.

21           Q     How was it used at the University?

22           A     Radium 226 was utilized as a calibration source.

23           BY MR. PAUL:

24           Q     Of the two methods, which one was used at the  
25 University of Cincinnati -- to measure the gamma or count

1 the gamma?

2 A Both methods was utilized.

3 Q Consistently or inconsistently?

4 A Basically, it depended on which technician was  
5 performing the leak test at that particular time.

6 Q Was there any procedure on this?

7 A No. Well, eventually, we found an older  
8 procedure, but as far as an up-to-date, written procedure  
9 for the proper way of counting Radium 226, there was not a  
10 procedure.

11 Q Did you ever discuss with Fritz the lack of  
12 procedures?

13 A Yes.

14 Q Do you recall when the discussion was?

15 A Approximately two weeks after I had started, I had  
16 asked him; could I review the procedure manual. He said we  
17 had one, and I looked through it, and the few that was in  
18 there, you know, I utilized those.

19 Q Did he ever explain why they didn't have  
20 procedures as far as everything was concerned?

21 A No.

22 Q At Purdue, when you worked there, did they have  
23 written procedures?

24 A Yes.

25 Q For every type of activity as far as radiation

1 safety? Was it all document on what you were supposed to  
2 do?

3 A Yes, for every activity you had to perform, you  
4 had a procedure.

5 BY MS. FAHEY:

6 Q I think when met last time, you stated that you  
7 were surprised -- and I can't remember whether it had to do  
8 with calibration of instruments. You were surprised by the  
9 method or the area where they did the calibration because  
10 there was background.

11 A Yes, that's with the Radium 226. We utilized a 1  
12 millicurie radium needle and we also had a 25 millicurie  
13 radium source and the cesium calibrator source. But for the  
14 GM meters, in window and side window probes, we utilized the  
15 radium needle.

16 It was a radium needle with a string. It was hung  
17 from a coat hanger and we had a tape measure and we just --  
18 we -- the technicians; we had calibrated the exposure at  
19 different distances using inverse square law and a gamma ray  
20 constant and we would just -- they would just go to those  
21 distances where they wanted them, because with the way our  
22 license read, we had to calibrate it one third and two  
23 thirds of each scale and they could figure it out from  
24 there.

25 BY MR. PAUL:

1 Q Were there other sources present in the lab when  
2 you performed these calibrations?

3 A Yes.

4 Q Would they have affected the calculations you  
5 performed on your calibration?

6 A They wouldn't affect the calculations.

7 Q Or the readings that you got on whatever you were  
8 using at that time?

9 A Yes.

10 Q So they did have some influence on the  
11 measurements you performed; is that correct?

12 A The cesium would.

13 BY MS. FAHEY:

14 Q Did the other techs realize that there was a lack  
15 of procedure or that the procedures that you were currently  
16 using were somewhat archaic? Maybe that's not a good choice  
17 of a word, but they were obviously not the same procedures  
18 you were used to at Purdue.

19 A Yes.

20 Q So everybody knew that you were kind of behind the  
21 eight ball as far as current technology or --

22 A Yes.

23 Q What was the procedure as far as sealed sources?  
24 How did the University maintain -- how did they keep track  
25 of all these sealed sources?

1 A Index cards.

2 Q Where were the index cards kept?

3 A They were kept in a card file over by the area  
4 where -- over by the area where the microwave and the  
5 refrigerator is located.

6 Q In the radiation technician office there?

7 A Yes, it's in the main office, but it was the area  
8 where the -- really where -- it's hard to describe.

9 Q Well, it was in the office in a area accessible to  
10 all the radiation safety techs?

11 A Yes.

12 Q Did anyone have any responsibility as to  
13 maintaining these cards, the inventory cards, or were they  
14 just a general record maintained by the office?

15 A Well, we were assigned what months, because all of  
16 us was -- we were very well aware, you know, of what months  
17 we had to go out and locate these sources and leak test  
18 these sources. We had a log, a monthly log of what needed  
19 to be accomplished for that month, so --

20 Q Who would make the assignments to do the wipe  
21 tests?

22 A The deputy radiation safety officer.

23 Q That was Prince Jason; is that correct?

24 A Yes.

25 Q So, at what point in time after you started work

1 at UC did you start doing these wipe tests?

2 A August.

3 Q August of '88?

4 A Yes.

5 Q Was that before or after the NRC inspection?

6 A Before.

7 Q Did each individual -- was that one of your  
8 periodic duties to perform wipe tests? Did everyone in the  
9 office do that?

10 A They were rotated, because the office are wipe  
11 tested quarterly. The betas and gammas are wipe tested  
12 semi-annually, and they were just rotated. If I do them  
13 this period, another technician would have to do them the  
14 next period.

15 Q How would you document your wipe tests?

16 A We would put the date that the wipe test was  
17 performed, the number; we would calculate the minimal  
18 detectable activity, the efficiency of the counting  
19 instrument, the background count and the net CPM for the  
20 specific source.

21 We will usually calculate another one on net  
22 activity.

23 Q Where would you record the information; on what  
24 type of document?

25 A On the back of the card.

1 Q Were you issued the cards when you were assigned  
2 to do the wipe test -- the inventory card?

3 A Not always. What was the general procedure?  
4 Would you go do the wipe test and obtain the necessary  
5 information and then go back to the office and document it,  
6 or would you take the card in the field?

7 A I used to take the card in the field with me,  
8 because all of the sources have serial numbers and model  
9 numbers on them.

10 Q Did the inventory card tell you where the source  
11 was located?

12 A Yes.

13 Q Did you ever have occasion to be assigned to do a  
14 source survey and not be able to locate that particular  
15 source?

16 A Yes.

17 Q Did it happen on more than one occasion?

18 A No.

19 Q Could you tell us the circumstances when this  
20 happened and what transpired as far as that particular  
21 incident was concerned?

22 A Well, it was the Nickel-63 card which were located  
23 in Wherry Hall, supposedly in a gas chromatograph. I went  
24 over to perform the wipe test. The sources were not there.  
25 I located the authorized user in charge of the sources, and

1 he recomranded me to go and speak with another gentleman,  
2 the head of the chemical stores.

3 Q Who was that.

4 A Pardon me?

5 Q Who was that; what was his name?

6 A The individual responsible for the cards was Dr.  
7 Tan. The individual over at the chemical and pharmacy  
8 supply store is David Frazer.

9 After I could not get suitable responses from  
10 them, I turned it over to Ken Fritz and he made a couple  
11 phone calls and that's all I heard of it.

12 Q In effect, you never performed the surveys on that  
13 source; is that correct?

14 A That's correct.

15 Q Was there any notation as to when the last time  
16 the source had been wipe tested? Was there any indication  
17 of that on the card?

18 A Well, I reviewed the card and the previous time  
19 when the source was supposed to be wipe tested. It had in  
20 storage, because our license specifically states that a  
21 source in storage does not need to be wiped until you take  
22 it out for usage. Then you have to perform a wipe test on  
23 that particular source.

24 Q If it was in storage, where would it be located?  
25 Where did they store these sources at, a central place?

1           A     Well, if it was storage, it all depends on your  
2 particular laboratory setup. You can store them in a  
3 machine and unplug the machine. You can store them in a  
4 drawer. You can store them in a lead shield.

5                     You can store them in the original packing  
6 material.

7           Q     Was there any indication on the card as to who had  
8 entered the notation in storage?

9           A     No, but usually, we could tell from the  
10 handwriting.

11          Q     Who had written that, as far as you could  
12 determine?

13          A     Right now, I don't remember, because I haven't  
14 seen the cards in a long time.

15          Q     The Nickel-63 source that was missing, or you  
16 couldn't locate; what type of source is this? How is it  
17 encased and where was it located? Was it accessible to  
18 people working in the lab? What type of setting was this  
19 source in?

20          A     It's a beta source and it's primarily used in gas  
21 chromatographs. It was just a solid metal source that then  
22 enclose in the tops of the gas chromatographs because it  
23 helps with your resolution.

24          Q     Was the gas chromatograph; was that machine still  
25 in the lab when you went there?

1 A Yes.

2 Q The source was just missing from it, right?

3 A The source, along with all of the other components  
4 of the machine.

5 Q Where they had been surplused or gutted or what  
6 was the situation?

7 A Well, my understanding was that the machine was  
8 originally moved to another location for storage and the  
9 machine came back down to the particular laboratory. As far  
10 as where the source was; we couldn't locate it. It could  
11 have become missing or misplaced during transition.

12 Q What was the physical size of the source?

13 A It's not a very big source. It's just a little  
14 source that you put in -- I don't know if it's a female or  
15 male adapter. I'm not very good at those kinds of things,  
16 but you just screw it on and hook it up and put it in the  
17 machine.

18 Q What was the actual, physical length of it?

19 A A couple centimeters, max.

20 Q It was metal; is that right?

21 A Yes.

22 Q Was it identified in any way as a source, once it  
23 was removed from the machine?

24 A I don't know, because most of the machines; they  
25 have "Caution, Radioactive Materials" on them. It's an NRC

1 requirement.

2 Q But the source itself didn't have an integral  
3 marking; is that correct?

4 A The source is -- all of the sources have "Caution-  
5 Radioactive Materials," or they would have the magenta tri-  
6 foil label on them.

7 Q Would the source have -- it was a Nickel-63  
8 source. Are you familiar with what the half life of Nickel-  
9 63 is?

10 A One hundred years.

11 Q So it would have still been within the regulatory  
12 requirements as far as activity is concerned; is that right?

13 A <sup>c</sup> Yes.

14 Q What did Dr. Tan tell you when you asked him where  
15 the source was?

16 A He specifically instructed me to go and speak with  
17 David Frazer.

18 Q Did he tell you it was in storage, or did you get  
19 that impression based upon what he was telling you?

20 A No, he said the source was there, because he had a  
21 drawer in his laboratory, and we looked in the drawer, him  
22 and I, and we saw the adapters and everything that the  
23 source is usually housed in, but no source.

24 He took me down -- walked me downstairs to the  
25 basement and I spoke with David Frazer. He said he was

1 going to call property control and call over to the surplus  
2 store of the Sears warehouse. He did that, and then him and  
3 I went upstairs of the third floor of the health professions  
4 building.

5 No equipment was up there, because they had  
6 remodeled that area. They had made offices out of that  
7 entire area. It used to be a storage area for the  
8 departments and the building area.

9 Q Do did you get the impression that Dr. Tan was  
10 just as surprised as you were that the source wasn't in the  
11 drawer, or did you get the impression from him that he knew  
12 it wasn't around and he didn't have any idea where it might  
13 be?

14 A I really can't answer that, because I really, you  
15 know -- well, my impression was that he was somewhat  
16 surprised that the sources were missing, but he did  
17 elaborate on how he did not utilize that machine anymore.  
18 He was going to be getting new equipment in.

19 BY MR. PAUL:

20 Q Did you make any entries on the inventory card  
21 regarding that particular situation?

22 A I didn't make any entries on the spaces there,  
23 because there was not room for it, but I did make entries on  
24 a couple cards and stapled it to it, informing Ken Fritz,  
25 whom I have contacted, the dates, the times, what course of

1 action that these individuals are planning to take and  
2 turned him over the cards. ←

3 Q How much earlier than you performed the survey;  
4 when was the last survey of that particular source? Do you  
5 recall what the time sequence was? Six months?

6 A February.

7 Q So, it was in February of '88 that they had marked  
8 "in storage;" is that right?

9 A Yes.

10 Q Did you have any discussions with the other techs  
11 about the situation? Did you talk with them in this  
12 instance where you couldn't find the source?

13 A Yes.

14 Q Did you talk with Prince Jason about it?

15 A Yes.

16 Q Did either he or any of the other techs indicate  
17 that they had also experienced this same type of problem?

18 A Would you rephrase that, please?

19 Q Did Prince Jason or any of the other techs  
20 indicate to you that they also experienced incidents where  
21 they couldn't find the source?

22 A Are you referring to this particular source?

23 Q No, no, any situation, any experience of similar  
24 situations which you just described, the missing Nickel-63  
25 source?

1 A No.

2 Q In August of 1988, there was an NRC inspection by  
3 Mr. Don Gibbons; do you recall that?

4 A Yes.

5 Q Prior to him coming out to the inspection, were  
6 you made aware that the NRC was coming on site for their  
7 inspection?

8 A Yes.

9 Q Approximately how much before the inspection  
10 actually occurred were you aware of that?

11 A I was made aware of it a couple days before he  
12 arrived.

13 Q Who made you aware of it?

14 A Ken Fritz.

15 Q What did he indicate to you? Did he discuss at  
16 all what type of performance he expected from you as far as  
17 when the inspector was on site?

18 A He told us to be busy, to keep busy.

19 Q Were there any reviews of inventory cards,  
20 sources, NRC required documentation, prior to the  
21 inspection?

22 A Yes.

23 Q Could you describe what took place?

24 A Ken instructed us to go through our records and  
25 make sure everything was completed. We had completed all

1 the tasks in a timely manner, as specified according to the  
2 license.

3 Q Had this incident with the Nickel source -- did  
4 that occur before or after this particular inspection?

5 A Before.

6 Q Did you have any discussion with the -- with Fritz  
7 about the missing source just prior to the NRC inspection?

8 A Yes.

9 Q And what was said? What did you tell him?

10 A I just asked him what was the status. I was  
11 curious of the status of the source<sup>2</sup> <sup>2</sup> <sup>2</sup>

12 <sup>2</sup> <sup>2</sup> <sup>2</sup> A ~~2~~ He had contacted some lady over there. I don't  
13 recall her name, and the two of them were working on trying  
14 to locate that source.

15 Q But as of just prior to the inspection it was not  
16 located? Is that correct?

17 A Yes.

18 Q In talking with you in our last -- in the  
19 interview on January 25, 1990, I have some notes that -- you  
20 stated that the record keeping related to these sources was  
21 not very organized and there had been a problem of missing  
22 sources and records existing for a number of years over  
23 there, at the University. Is that correct?

24 A Yes.

25 Q At the time of the inspection were there any other

1 sources missing that you were aware of?

2 A No.

3 Q Just prior to the inspection did --

4 A May I back up, please?

5 Q Sure.

6 A I was aware of another source that was missing,  
7 that was thrown out -- inadvertently thrown out -- but it  
8 was not an NRC regulated source. It was a state regulated  
9 source.

10 Q This problem with record keeping, did that -- that  
11 you described to us earlier -- did that pertain to NRC  
12 regulated sources or was it a generic problem, or  
13 programmatic problem at the University as far as the record  
14 keeping related to these sources?

15 A It was a programmatic problem.

16 Q Was this problem in existence at the time of the  
17 NRC inspection of August of 1988

18 A Yes.

19 Q Now at that time it was my understanding that  
20 Prince Jason gave you a number of inventory cards prior to  
21 the NRC inspector arriving on site. Is that true?

22 A Two inventory cards.

23 Q And what were these inventory cards for? What  
24 type of sources?

25 A They were the missing Nickel 63 sources.

1 Q And were there two sources or one source missing?

2 A Two sources.

3 Q And were these the two that you were involved  
4 with?

5 A Yes.

6 Q So this gas chromatograph machine had two sources  
7 within it that you couldn't locate?

8 A It was two separate gas chromatograph machines.

9 Q And those were both located in Dr. Tan's lab?

10 A Yes.

11 Q And did Prince Jason -- what did he say when he  
12 gave you the cards?

13 A He came out of the office and he just said -- it  
14 was the three technicians in the office -- two technicians  
15 and himself in the office, and he just said, here, do  
16 something with these.

17 Q Who else was there when he did that -- said that?

18 A Jeff Barbro and Pat Harris and myself.

19 Q Was there any other explanation as to why he was  
20 giving you the cards?

21 A No, not at the time.

22 Q Was there any later?

23 A Yes, later he came and he said that Ken told him  
24 to do something with those cards. ←

25 Q Did he ever say why?

1 A No.

2 Q Did you have an understanding of why you were  
3 given the cards?

4 A Yes, my understanding was Ken told him to do  
5 something with them and so we did something with them.

6 Q Did you understand it to be an attempt to keep the  
7 cards from the NRC inspector?

8 A Yes.

9 Q And what did you do with the cards?

10 A I put them in my desk drawer.

11 Q Are they still there?

12 A No.

13 Q Where are they?

14 A They're in the file cabinet somewhere.

15 Q Was Fritz present when this happened?

16 A He was in his office.

17 Q Is his office right off yours, or connected to  
18 yours in any way?

19 A His office is in the back. It's one big office  
20 but he has another office within a large office in the back.

21 Q Was he in a position where he would have heard the  
22 discussions you had with Prince Jason?

23 A Yes.

24 Q Do you recall how long the NRC inspector was on  
25 site that particular inspection?

1 A Five days.

2 Q Did he ever do any type of examination of the  
3 inventory cards, that you were aware of?

4 A Just paged through them, like he did all the other  
5 records.

6 Q Did -- were you given any instructions by Fritz or  
7 Jason about the -- being around when the NRC inspector was  
8 there?

9 A From Fritz.

10 Q What did he tell you?

11 A He just told us to go on with business as usual  
12 and to make sure we keep busy.

13 Q Did he ask you to not be around when the NRC  
14 inspector was present in the office?

15 A No.

16 Q Did you talk at all with the NRC inspector during  
17 that inspection?

18 A Yes, briefly.

19 Q And what was that concerning?

20 A Just chitchat. How are you doing? How do you  
21 like Cincinnati? How long have you been with the NRC?

22 Q No interview regarding the procedures or any  
23 specific matter related to radiation safety?

24 A No.

25 Q Did you ever consider discussing the situation

1 with the missing inventory cards with the inspector -- NRC  
2 inspector?

3 A Yes, if he would have asked.

4 Q But you weren't waiting for him to ask?

5 A Yes.

6 Q And why was that?

7 A Because at that particular time I didn't consider  
8 the sources lost, because we were still trying to locate  
9 them.

10 Q But in fact, he never did ask you, is that  
11 correct?

12 A That's correct.

13 Q At that particular point in time did you have any  
14 concerns regarding the radiation safety program at the  
15 University of Cincinnati?

16 A Yes.

17 Q And were your concerns related to administrative  
18 type concerns or were they related to radiation safety?

19 A Both.

20 Q And did you share -- did the other radiation  
21 safety technicians share those concerns with you?

22 A Yes.

23 Q Did you ever consider at that time discussing  
24 these with the NRC inspector?

25 A If he would have asked specific questions, yes.

1 BY MS. FAHEY:

2 Q Was your reluctance to discuss these concerns with  
3 the inspector related to the gag order you'd signed a couple  
4 of months previous?

5 A Somewhat.

6 Q Okay, now earlier you stated that the gag order  
7 really didn't have any affect on you.

8 A No, but I was not going to volunteer information,  
9 because he was the one there performing the inspection.

10 Q Did you expect the inspector to ask the techs if  
11 they had any concerns?

12 A Yes.

13 Q And he never did?

14 A That's correct.

15 Q Was it about this time, August of 1988, that the  
16 techs started documenting radiation safety concerns in  
17 memos? I don't know whether they went up to the Radiation  
18 Safety Committee at that time. But it was around this time  
19 that all of you were pretty much concerned about the way the  
20 department was functioning and the direction it was going  
21 in?

22 A Yes, right after the inspection.

23 Q And was that because of the lack of attention  
24 during the inspection?

25 A No, it was the lack of performing a good

1 inspection.

2 Q Okay, that's what I meant.

3 A Yes.

4 Q You said it better. Okay?

5 BY MR. PAUL:

6 Q The note I have in our last interview said that  
7 you and the other technicians gave "everything but red  
8 flags" as indicators to Gibbons, the NRC inspector, that you  
9 wanted to talk to him regarding your concerns. Did you say  
10 that back then?

11 A Yes.

12 Q But Gibbons never followed up on these  
13 indications?

14 A No.

15 Q Did you attend either the entrance or the exit to  
16 the inspection?

17 A No.

18 Q Do you know if one was held and who from the  
19 University attended?

20 A I know Ken Fritz was there, at both of them. And  
21 as far the entrance goes, I know George Alexander was  
22 present. But the exit -- I don't know who was present at  
23 that, besides Ken Fritz. ←

24 Q In December 1988, early January 1989, you and the  
25 other radiation safety technicians appeared before the

1 University of Cincinnati Radiation Safety Committee? Is  
2 that true?

3 A Yes.

4 Q And at that time, you presented a number of  
5 concerns. Is that true?

6 A Yes.

7 Q Did you mention at all -- at that time what was  
8 the status of the Nickel 63 source that you had found  
9 missing? Was it located?

10 A No.

11 Q Did you bring that concern up to the Radiation  
12 Safety Committee?

13 A No, because that was not the purpose of the  
14 meeting, to bring up specifics. It was to give them a  
15 general overview of problems -- administrative and technical  
16 problems associated with the Radiation Safety Office. It  
17 was basically a "get to know you" session that we could  
18 familiarize ourselves with the Committee and they could do  
19 the same, vice versa.

20 Q And it was at that meeting that you presented a  
21 number of memos --

22 A Yes.

23 Q -- documenting a series of concerns, both  
24 administrative and related to radiation safety, is that  
25 right?

1 A Yes.

2 Q Did the Radiation Safety -- let's backtrack. Who  
3 was the Chairman of the Radiation Safety Committee when you  
4 went before them?

5 A Dr. Jerome Wyatt.

6 Q And was he at that meeting?

7 A Yes.

8 Q Was Ken Fritz at the meeting?

9 A No.

10 Q Was George Alexander at the meeting?

11 A Yes.

12 Q Did his presence inhibit you in any way from being  
13 up concerns?

14 A No.

15 Q Was the gag order brought up to the Committee?

16 A Yes.

17 Q And subsequent to your meeting with the Committee,  
18 did they take any actions related to your concerns? By your  
19 concerns, I mean all the radiation safety technicians.

20 A Yes.

21 Q And did they ever address the issue of the gag  
22 order?

23 A Yes. Problem notification process.

24 Q Could you explain? I'm not familiar with that.

25 A That's the gag order.

1           Q     It's kind of a fancy name. What did they say  
2     about it?

3           A     Well, they -- a few of the members were furious.  
4     They specifically stated it was illegal and they proceeded  
5     to get advice from the legal counsel of the University to  
6     try to develop a problem notification process that was  
7     legal.

8           Q     Did they ever change the order?

9           A     Yes.

10          Q     What's the current policy at Cincinnati --  
11     University of Cincinnati?

12          A     We notify the Deputy Radiation Safety Officer and  
13     he notifies<sup>s</sup> the Radiation Safety Officer and it's the  
14     Radiation Safety Officer's responsibility to bring those  
15     concerns to the Committee, the Chairman of the Committee,  
16     and then the Committee addresses those issues.

17          Q     Is there any language related to going to outside  
18     agencies about radiation safety problems?

19          A     No. Because, see, the rules on Form 3 in that  
20     section specifically states that before you go to the  
21     Nuclear Regulatory agency it is your responsibility as a  
22     radiation worker to inform the employer and give them  
23     adequate time to correct those deficiencies.

24                 BY MS. FAHEY:

25          Q<sup>m</sup>     Did you subsequently sign another form?

1 A No.

2 Q Was the original form that you signed returned to  
3 you?

4 A No.

5 Q So you don't know where the original is at this  
6 point?

7 A No.

8 B' MR. PAUL:

9 Q At the meeting with the Radiation Safety Committee  
10 in early 1989, late 1988, was -- did they ever ask Alexander  
11 to explain the gag order?

12 A Yes.

13 Q What was his explanation? Do you recall?

14 A No, I don't recall his explanation. They did  
15 formulate a subcommittee to look into all of those documents  
16 and concerns that we had presented to the Committee.

17 Q Do you know Greg Zembrodt?

18 A I don't know him. I've heard of him. I've heard  
19 I was his replacement.

20 Q Were you aware that he had found missing sources  
21 also?

22 A No, because I don't know Greg Zembrodt.

23 Q The end here, see documentation where he had  
24 similar circumstances such as yours that he attempted to  
25 survey sources, was he unable to locate?

1 A No.

2 [Pause.]

3 Q In that same time frame do you recall an incident  
4 where Fritz approached you about making allegations to the  
5 NRC?

6 A Fritz didn't approach me.

7 Q What happened?

8 A Apparently an individual from NRC had called which  
9 is normal procedure when an individual make allegations  
10 against a licensee and he informed him that someone, an  
11 anonymous caller had contacted him with allegations  
12 concerning the University of Cincinnati's license and rumor  
13 will had it that they, the individual that contacted Ken  
14 Fritz said that the individual was (b)(7)(c)

15 Q How did you become aware of it? Did Ken Fritz  
16 come to you or how did you obtain this knowledge that the  
17 NRC had called Fritz about an allegation? How did you learn  
18 about it?

19 A How did I learn about it? Well, when they had  
20 looked at the phone logs that we have, because we had the  
21 computerized phones. It records all long distance phone  
22 calls.

23 Q Who did this?

24 A Pardon me?

25 Q Who looked at the records?

*1 re return*

1           A     Well apparently -- well, I don't know, who, you  
2 know, wanted the records, but I know Ken Fritz had the  
3 records.

4           Q     How did you become aware that he was looking at  
5 the records?

6           A     Prince Jason informed us.

7           Q     So everything you learned about this came through  
8 Prince Jason?

9           A     No.

10           MS. FAHEY: Okay, why don't you just go ahead and  
11 explain that, in your own words.

12           THE WITNESS: Well, after the phone call was made,  
13 certain people around there, because the place is a rumor  
14 mill, as all big places like that, and they just said that  
15 an anonymous caller had called with allegations concerning  
16 the University and that the individual from the Nuclear  
17 Regulatory Commission had mentioned that it was an  
18 individual from (████████████████████) and that was the end  
19 of it.

20           BY MR. PAUL:

21           Q     You learned about this through Prince Jason?

22           A     Prince Jason and other members of the Committee.  
23 Radiation Safety Committee.

24           Q     Who?

25           A     Dr. Ed Silberstein.

6, 7, 8  
on time

1 Q Silberstein, what did he tell you?

2 A Well, after I had heard that information that it  
3 was a person ( [REDACTED] ) I went down to Dr. 61X  
4 Silberstein's office and I asked him. And he said, yes,  
5 that's what he had heard. And his exact words was, he said,  
6 well, because him and I had similar conversations about a  
7 lot of radiation safety problems a week or so before that  
8 incident had happened, and his exact words were, "Well, at  
9 first I thought it was you." But he said I know it wouldn't  
10 be you because you're working too hard and you know, we're  
11 trying to solve the problems internally.

12 And I instructed him, at least I told him that I  
13 was going to write Dr. Wiot a letter informing him that I  
14 was not the one who contacted NRC. I had contacted NRC  
15 previously but it was under the direct supervision of Ken  
16 Fritz to request some Form 3 maps.

17 Q Did Fritz ever approach you about this allegation?

18 A No.

19 Q Never said anything at all about it to you, is  
20 that right?

21 A Well, he didn't ever state someone from ( [REDACTED] ) 61C  
22 ( [REDACTED] ) but he had mentioned to all of us that  
23 someone had called NRC with allegations. That's the way it  
24 happened after he talked to the individual. He came out and  
25 he told Prince Jason he would like to talk to him. And they

1000 - time

1 proceeded to go back in the office and they looked at the  
2 phone ledger, the phone log and everything, and Prince Jason  
3 came out and told us that, you know, they had pulled the  
4 phone log and everything, and it was a call to Glen Ellyn on  
5 that particular day in question. But he had instructed Ken  
6 that there was no way that a phone call with all these  
7 allegations could have been made in that short period of  
8 time. And I was a little upset and I went to see Dr.  
9 Silberstein.

10 BY MS. FAHEY:

11 Q Why would you pick him out of all the people on  
12 the Radiation Safety Committee?

13 A Because I trust him.

14 Q And that's why you went to him for a week or two  
15 prior to that with your other concerns? Do you recall what  
16 the anonymous allegations were supposedly about?

17 A Commercialization of a license. Non-NBS traceable  
18 standards and Prince Jason's qualifications.

19 BY MR. PAUL:

20 Q Did this come up regarding the allegation before  
21 or after the technicians had gone to the Radiation Safety  
22 Committee?

23 A After.

24 Q By -- what was the time frame after? Do you  
25 recall?

1 A No, I don't recall the time frame.

2 Q Do you know if the University, meaning Fritz and I  
3 guess the Radiation Safety Committee, ever found out who  
4 made the allegations?

5 A I don't know.

6 Q Was any type of disciplinary action taken against  
7 you over this matter?

8 A No.

9 BY MS. FAHEY:

10 Q I have a question that goes back to the beginning  
11 when we were talking about your being hired at the  
12 University. When you were interviewed for your job, were  
13 you interviewed by Fritz?

14 A Not initially.

15 Q But subsequently to coming on board with the  
16 University?

17 A Yes.

18 Q At any time did he make mention of the ~~\_\_\_\_\_~~ *6.7C*  
19 ~~\_\_\_\_\_~~ matter to you?

20 A No. He didn't.

21 Q And also, did you eventually see the inspection  
22 report from the August of '88 NRC inspection?

23 A Yes.

24 Q Did it independently identify any of the concerns  
25 that you all had?

*6.7C notes*

1 A No.

2 Q None of them?

3 A It was one of the short forms that you really  
4 don't have to write a report up. It was something about we  
5 missed a meter here and there and they missed some hood  
6 flows one year in '87 doing hood flow calibration charts.  
7 It's nothing major. It didn't address any of the concerns  
8 that we had.

9 BY MR. PAUL:

10 Q Were you ever asked to falsify any records  
11 regarding documents required to be kept by the NRC?

12 A No.

13 Q Are you aware of any falsification of records at  
14 the University of Cincinnati?

15 A Not any willful falsification. But if you want to  
16 consider using incorrect formulas, I was aware of some  
17 incorrect formulations, but that's the extent of it.

18 Q What do you mean by formulations?

19 A Well, in the health physics profession, yeah,  
20 formulas for every type -- there were different formulas for  
21 every type of calculation that you have to perform and I  
22 noticed that the metal detector activity formula was off.  
23 It wasn't a correct formula, you know, utilized in the  
24 industry. They wanted -- what we were presently utilizing  
25 was the one that the air associated with the single count

1 rate. It wasn't the metal detector activity formula.

2 Q And who was responsible for which formulas were  
3 used or equations? Was it formula or equation?

4 A It was an equation. Ken Fritz.

5 Q Was this a standard formula that he used in every  
6 instance and was just using the wrong one? Or, was this an  
7 equation that he just selectively used to get certain  
8 results?

9 A It was a formula that was utilized through all the  
10 test procedures. It was just a, probably an oversight.

11 Q It was consistently applied? Not selectively?

12 A Yes it was consistently applied.

13 MR. PAUL: Anything else?

14 MS. FAHEY: No.

15 MR. PAUL: At this time, let's go off the record.

16 [Discussion off the record.]

17 MR. PAUL: Mr. Boyd, have I or any other NRC  
18 representative here threatened you in any manner, offered  
19 you any rewards in return for this statement?

20 THE WITNESS: No.

21 MR. PAUL: Have you given this statement freely  
22 and voluntarily?

23 THE WITNESS: Yes.

24 MR. PAUL: Is there anything further you care to  
25 add to the record?

1 THE WITNESS: Yes. I would like to clarify. The  
2 reason I went to Dr. Silberstein is because he was the  
3 Chairman of the subcommittee looking into the radiation  
4 health physics technicians' concerns.

5 MR. PAUL: Were you dealing with him on a daily  
6 basis at that time or on a regular basis at that time?

7 THE WITNESS: We were on a regular basis. He was  
8 keeping us posted as to the progress of the subcommittee  
9 findings.

10 MR. PAUL: Were you confident that he was acting  
11 on your concerns at that time?

12 THE WITNESS: Yes.

13 MR. PAUL: The interview is concluded.

14 MR. CASSADY: Can we, before we conclude it, you  
15 said something yesterday about Jeff Barbro being able to  
16 obtain a copy of the transcript if he wrote in and asked for  
17 a copy.

18 MR. PAUL: Right.

19 MR. CASSADY: Can Melvin do the same?

20 MR. PAUL: Same, yes, Melvin, if you want a copy  
21 of this, just -- do you have a business card?

22 MR. CASSADY: We have it.

23 MR. PAUL: Okay. Send me a letter that you want a  
24 copy of it and at the conclusion of the investigation we'll  
25 send you a copy at the address you tell us to. And if you

1 want to review the record, I mean, the interview before the  
2 conclusion of the investigation, we can make arrangements  
3 for that.

4 MR. CASSADY: How are those arrangements --  
5 what --

6 MR. PAUL: Call me up or send me, call me up and  
7 I'll make arrangements. Probably have you follow it up with  
8 a letter for our file. They want anything like that  
9 documented. But then next time I'm in town or some  
10 situation such as that that I'm down here I'll bring them  
11 with me and we can arrange a meeting of the people that want  
12 a copy.

13 MR. CASSADY: I'm sure they'll want to do it. I'm  
14 advising them to do that. I'm just telling you that's going  
15 to happen.

16 MR. PAUL: And then --

17 MS. FAHEY: You can't copy it. You'll have to  
18 review it with one of us present while you're reviewing it.

19 MR. PAUL: But then you read it over and if you  
20 feel there's corrections, you can write a letter and include  
21 that as part of the transcript of the interview. You know,  
22 we'll work it out ahead of time.

23 Off the record.

24 [Whereupon, at 10:24 a.m., the interview was  
25 concluded.]

## REPORTER'S CERTIFICATE

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

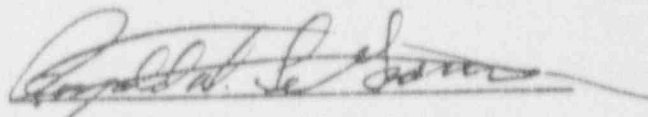
in the matter of:

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.