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## NUCLEAR REGULATORY COMMISSION

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Title: In the matter of:  
Georgia Institute of Technology  
(GA Tech Research Reactor Renewal  
of License No. R-97)

Docket Number: 50-160-REN  
ASLBP No. 95-704-01-REN

Location: Atlanta, Georgia

Date: May 20, 1996

Work Order No.: NRC-681

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1 UNITED STATES OF AMERICA  
2 NUCLEAR REGULATORY COMMISSION

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4 ATOMIC SAFETY AND LICENSING BOARD

5 HEARING

6 -----X

7 In the matter of: :  
8 GEORGIA INSTITUTE OF : 50-160-REN  
9 TECHNOLOGY : Re: License Renewal  
10 (Georgia Tech Research : ASLBP No.  
11 Reactor Renewal of License : 95-704-01-REN  
12 No. R-97) :

13 -----X

14 Monday, May 20, 1996

15 Hearing Room 1010

16 1718 Peachtree Street

17 Atlanta, Georgia

18 The above-entitled matter came on for hearing,  
19 pursuant to notice, at 9:50 a.m.

20 BEFORE:

21 CHARLES BECHHOEFER Chairman  
22 DR. JERRY R. KLINE Administrative Judge  
23 DR. PETER S. LAM Administrative Judge

24

25



1     APPEARANCES:

2

3             On behalf of the NRC:

4                     SHERWIN TURK, ESQ.

5                     COLLEEN WOODHEAD, ESQ.

6             of:   Office of the General Counsel

7                     U.S. Nuclear Regulatory Commission

8                     Washington, D.C. 20555

9                     (301) 504-1589

10            ALSO PRESENT:   MARVIN MENDONCA, Project Manager

11

12            On behalf of the Intervenor:

13                     GLENN CARROLL

14                     139 Kings Highway

15                     Decatur, Georgia 30030

16                     (404) 378-9592

17                     (404) 378-4263 (GANE)

18

19            On behalf of Licensee:

20                     ALFRED L. EVANS, JR., ESQ.

21                     Assistant Attorney General

22                     Georgia Department of Law

23                     Judicial Building

24                     Atlanta, Georgia 30334

25

1 I N D E X

2 WITNESSES: DIRECT CROSS REDIRECT RECROSS

3 Brian Copcutt

4 By Ms. Carroll 999 -- -- --

5 By Mr. Evans -- 1096 -- --

6

7 E X H I B I T S

8 EXHIBIT NO. DESCRIPTION IDENT REC'D

9 GANE:

10	1	Copcutt Resume	1001	1003
11	2	Copcutt Board Certification	1002	1003
12	3	1989 Letter GT to Copcutt	1004	
13	4	1990 Letter GT to Copcutt	1004	
14	5	Copcutt Letter of Acceptance	1005	
15	6	July 24 Filter Replacement	1009	1014
16	7	July 26 Inspection	1009	1014
17	8	Director's Response Memo	1009	1014
18	9	8/3/90 Memo Copcutt to Karam	1009	1014
19	10	9/28/90 Revsin Memo	1023	1037
20	11	10/4/90 Copcutt Memo	1023	1037
21	12	10/5/90 Performance Review	1028	1037
22	13	10/8/90 Letter Copcutt to Karam	1035	1037
23	14	10/10/90 Memo Karam to NSC	1046	1060
24	15	10/18/90 Memo Revsin to Karam	1046	1060
25	16	5/6/96 Letter Mulder to Carroll	1046	1060

1	<u>EXHIBIT NO.</u>	<u>DESCRIPTION</u>	<u>IDENT</u>	<u>REC'D</u>
2	Georgia Tech:			
3	21	10/5/90 Performance Review	1111	--

P R O C E E D I N G S

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CHAIRMAN BECHHOEFER: Good morning, ladies and gentlemen. This is the start of the evidentiary hearing in the matter of the Georgia Tech Research Reactor, which is seeking a renewal of their license, their operating license.

I will introduce the Atomic Safety & Licensing Board which is hearing this proceeding, although most of you are familiar with us already. On my left is Dr. Peter Lam, he's a nuclear engineer. On my right is Dr. Jerry Kline, who's an environmental scientist. My name is Charles Bechhoefer, I'm an attorney and Chairman of this Licensing Board.

For the benefit of the reporter, could various people who are participating in the evidentiary hearing itself introduce themselves? We'll start from my left to my right. Do you want to start?

MS. WOODHEAD: My name is Colleen Woodhead, I'm counsel for staff.

MR. TURK: Good morning, Your Honor, my name is Sherwin Turk, I'm also with NRC staff.

MR. EVANS: Alfred Evans, Senior Assistant Attorney General, of counsel for the Georgia Institute of Technology, the Licensee.

DR. KARAM: I'm Ratib Karam, I'm the Director

1 of the Nuclear Research Center at Georgia Tech.

2 MS. CARROLL: I'm Glenn Carroll, I'm  
3 representing Georgians Against Nuclear Energy.

4 MR. JOHNSON: My name is Robert Johnson and I'm  
5 the one that standing was granted to.

6 CHAIRMAN BECHHOEFER: Normally we would ask for  
7 opening statements and because of a ruling which we made  
8 last Thursday and circulated copies to the parties, I think  
9 Ms. Carroll's opening statement is going to take a little  
10 longer than we had expected.

11 MS. CARROLL: I don't believe so, it'll be  
12 brief. If I'm blowing an opportunity --

13 CHAIRMAN BECHHOEFER: But we gave you an  
14 opportunity to do a fairly lengthy one. But in any event,  
15 why don't we start with the applicant, who has the burden  
16 of proof, can lead off with their opening statements and  
17 then GANE would be next normally and the NRC staff would be  
18 the final opening statement.

19 MR. EVANS: I did have one question and that's  
20 more housekeeping. We're obliged to put in ten copies of -  
21 - or have ten copies and file copies of documentary  
22 exhibits, and also I have not yet given the court reporter  
23 the direct testimony. At what point do we do that?

24 CHAIRMAN BECHHOEFER: At the time it's being  
25 initially introduced, when the particular witness -- or if

1     you're going to do it as a panel, when the panel appears.  
2     And normally -- except that some of these are a little  
3     thick -- normally the particular witness' testimony will be  
4     bound into the record, the prepared direct testimony. Now  
5     if it's too thick, then there's a mechanical problem and we  
6     can talk to the reporter about how we want to do that. But  
7     that is bound into the testimony as if read and the witness  
8     can make any corrections that he or she wishes.

9                 MR. EVANS: I suppose I'm anxious to lighten  
10    myself of a great deal of paper.

11                CHAIRMAN BECHHOEFER: Right.

12                MS. CARROLL: When are we going to do our  
13    housekeeping?

14                CHAIRMAN BECHHOEFER: Well, normally it would  
15    be desirable for documents that are going to be introduced  
16    to be circulated to us, some of which we may have already  
17    received -- I'm not sure. Some of the inspection --

18                MS. CARROLL: Well, we haven't worked out when  
19    John Galloway will testify and where we're going to put  
20    Mike Salort of A Current Affair, and I believe I'm going to  
21    get to testify on a couple of items that actually I was a  
22    fact witness to.

23                CHAIRMAN BECHHOEFER: That's correct, that's  
24    what we ruled.

25                MS. CARROLL: So I mean, are we going to just



1 clear up -- these two witnesses are the things -- is the  
2 housekeeping I have.

3 CHAIRMAN BECHHOEFER: My other question is that  
4 I was told that from the schedule we established, one of  
5 the witnesses who was scheduled for Friday wouldn't be  
6 available unless we held our hearing on a cruise ship. And  
7 I didn't turn that down flatly but other than that, we  
8 would have to reschedule that witness for some other time,  
9 and we're amenable to work it out.

10 MS. CARROLL: I believe the parties did work  
11 out that person.

12 CHAIRMAN BECHHOEFER: Okay. Well, we haven't  
13 been officially told yet, I don't think. I think we were  
14 told that you were looking for sometime Tuesday.

15 MS. CARROLL: Uh-huh.

16 CHAIRMAN BECHHOEFER: Mr. Turk, is that  
17 correct?

18 MR. TURK: Ms. Carroll and I have agreed to see  
19 if Rebecca Long could be brought forward on Tuesday. I had  
20 not been able to reach Mr. Evans to speak to him about that  
21 and perhaps at some time --

22 MR. EVANS: I have no problem with that.

23 MR. TURK: In that case, we'll look for some  
24 time on Tuesday whenever the questioning of the prior  
25 witness is completed.

1 MR. EVANS: I can say right now I have no  
2 problems with that at all.

3 MS. CARROLL: John Galloway has schedule  
4 restrictions and is only available -- he liked the 4:00 in  
5 the afternoon idea, but he's only available Wednesday. And  
6 if the parties can agree to cut short whatever we're doing,  
7 if we aren't finished, and take Mr. Galloway's testimony  
8 and free him up for his new job.

9 CHAIRMAN BECHHOEFER: Let me see who we have  
10 scheduled. Well, we had -- the staff's panel A is  
11 scheduled for Wednesday. Would it be -- what time did you  
12 say Mr. Galloway would --

13 MS. CARROLL: We had generally agreed that we  
14 would be happy to put him right after lunch or right at the  
15 end of the day to minimize how much time he had to take off  
16 from work.

17 CHAIRMAN BECHHOEFER: That was Tuesday when he  
18 was scheduled.

19 MS. CARROLL: And when it got more free form  
20 and Mr. Turk had proposed that we perhaps call him at lunch  
21 time on the day when we projected we might be able to take  
22 him, and I ran that by him, he has a staff meeting on  
23 Tuesday, so it'd be painfully obvious if he was absent from  
24 that, and I agreed to pitch his sense that Wednesday was  
25 the day that he could do it with the least impact.

1                   CHAIRMAN BECHHOEFER: Does the staff object to  
2 interrupting your panel A?

3                   MR. TURK: I wouldn't like to interrupt the  
4 questioning that's going on. I would have no problem  
5 fitting Mr. Galloway in when some portion of their  
6 testimony is completed. For instance, when the applicant  
7 is done with their cross, then bring on Mr. Galloway, as  
8 opposed to simply stopping someone's cross examination in  
9 the midst of its progress. But I think we'll find a  
10 natural stopping point sometime on Wednesday that we could  
11 fit him in.

12                  MS. CARROLL: And I believe he probably  
13 wouldn't even take an hour, do you think?

14                  CHAIRMAN BECHHOEFER: Well, why don't the  
15 parties, or staff and GANE particularly, try to work  
16 something out so that it's sometime during Wednesday, and  
17 maybe it would be desirable right after our lunch break to  
18 put Mr. Galloway on, wherever we are on the other. That  
19 would be 1:00 or 1:30, I don't know what time it'll be but  
20 if we break for lunch at 12:00 more or less, we could make  
21 it earlier or later depending on where in our witness we  
22 are -- where in the testimony and cross examination we are  
23 at the moment, but right after lunch might be desirable.

24                  MS. CARROLL: Mike Salort is available to come  
25 and is willing to testify.

1 CHAIRMAN BECHHOEFER: Now who is he?

2 MS. CARROLL: He is the fellow who committed  
3 the intrusion, if you will, in the Neely facility and taped  
4 it for A Current Affair. And I did reach him and I told  
5 him the time frames and he's available for all of it. Now  
6 of course, the plane ticket would be cheaper if we had a  
7 little advanced notice. Anyway, I couldn't do anything  
8 until all the parties were involved on what we agreed upon  
9 would be the time we wanted him to testify.

10 MR. TURK: I think there's some confusion, Your  
11 Honor, as to his appearance. I understand that GANE is not  
12 going to be subpoenaing him?

13 CHAIRMAN BECHHOEFER: Well, we have subpoenas  
14 here if GANE needs a subpoena.

15 MS. CARROLL: If GANE could get out of paying a  
16 plane ticket --

17 CHAIRMAN BECHHOEFER: Pardon?

18 MS. CARROLL: If GANE could get out of paying a  
19 plane ticket, which I think will be \$200 probably, that  
20 would be ideal to us. And I'm not sure if the system has  
21 any way for any other party to get this important witness  
22 here if GANE has gone broke. But GANE -- anyway, I feel  
23 it's really important that he appear. He's not hostile,  
24 particularly; in fact, this was a feather in his cap and  
25 will further his career that he had this adventure on

1 videotape.

2 CHAIRMAN BECHHOEFER: I take it he is not from  
3 the local office?

4 MS. CARROLL: No. In fact, that was my first  
5 thing, the cameraman is from Utah, so I think we might as  
6 well bring the brains of the outfit in from Manhattan, and  
7 that's -- well, New Jersey.

8 MR. TURK: In our telephone conference call,  
9 Your Honor, I had suggested that the parties speak and see  
10 if we can reach some sort of stipulation as to the purpose  
11 for the offering of the tape and perhaps be able to reach  
12 an agreement. I tried placing two calls to Glenn Carroll  
13 last week, I was unable to reach her, so we have not had a  
14 chance to speak. I would suggest at some point during a  
15 break today, the parties speak and let's see if we can  
16 reach an agreed upon a course and get back to you later  
17 today with the results of those discussions.

18 CHAIRMAN BECHHOEFER: Okay, that's fine with  
19 us.

20 MS. CARROLL: Okay.

21 Now as far as arguing about any protective  
22 order stuff, I think we can do that when Rebecca Long is --  
23 I mean before her testimony, we can finish our arguments  
24 about what we can and can't do with the information we  
25 learned.

1 CHAIRMAN BECHHOEFER: Well, I signed the -- was  
2 that a proposed protective order? I thought that was one  
3 that everybody had agreed to.

4 MR. TURK: Yes, it was, Your Honor.

5 MS. CARROLL: But I alerted Mr. Turk to some  
6 information we found that is not about people's home  
7 addresses or anything, and he just didn't return some of my  
8 phone calls either on Friday. I know he was busy packing  
9 and getting his ducks in a row, so we haven't worked that  
10 out, and we probably need to work that out before Ms. Long  
11 takes the stand.

12 CHAIRMAN BECHHOEFER: Okay.

13 MR. TURK: I'd be happy to talk to Glenn. In  
14 fact, I left two messages on her machines and I know she  
15 was busy Friday, I was as well.

16 MS. CARROLL: I think you called the wrong  
17 number the first time, I only got one message. But that's  
18 immaterial, we haven't worked this out and we need to work  
19 this out.

20 MR. TURK: We'll talk then.

21 CHAIRMAN BECHHOEFER: I guess, given the time,  
22 we perhaps should go directly into the limited appearance  
23 section, which will be for an hour. Then the parties can  
24 make their opening statements after that.

25 (Whereupon, at 10:00 a.m., there was a



1           recess in the proceedings for the purpose of  
2           taking limited appearance testimony, after  
3           which the hearing continued.)

4           CHAIRMAN BECHHOEFER: Why don't we go to the  
5           opening statements? Why doesn't Georgia Tech lead off, Mr.  
6           Evans, with your opening statement?

7           MR. EVANS: I am struck to some extent by what  
8           we have heard from the public comments part of the  
9           proceeding, the opening part, and I hear a lot of what I  
10          would call policy argument that it is a bad policy to have  
11          something in the middle of the city. I, obviously, you  
12          know, can't expect people -- They are not lawyers and I  
13          can't expect them to come up with any statutes prohibiting  
14          a reactor in Atlanta or any other urban area. I note that  
15          MIT is located in the Boston area. I note that the  
16          University of Virginia, my alma mater, is located in  
17          Charlottesville, which is not an entirely insignificant  
18          town. So it is not at all uncommon to have reactors in  
19          urban areas, but the main thing is, this is a policy  
20          argument. GANE stands for Georgians Against Nuclear  
21          Energy. There's no secret about that. There's no secret  
22          from -- They have been very candid and very honest that  
23          they oppose nuclear energy. They don't care, really, about  
24          management. They don't care about anything other than  
25          eliminating the reactor at Georgia Tech.

1                   The management -- As we will see, the  
2 management is one of originally nine points they tried to  
3 make, and it is kind of a shotgun approach, if this one  
4 doesn't work, maybe another one will. For reasons that  
5 escape me completely, the management issue has survived,  
6 the other eight have gone by the wayside, is facially  
7 without any merit from one reason or another. We do have  
8 the management issue.

9                   CHAIRMAN BECHHOEFER: Well, one of them was  
10 essentially settled.

11                  MR. EVANS: Sir?

12                  CHAIRMAN BECHHOEFER: One of the issues was  
13 essentially settled.

14                  MR. EVANS: Well, yes.

15                  CHAIRMAN BECHHOEFER: It didn't drop out. By  
16 agreement--

17                  MR. EVANS: Well, we have right now the  
18 management issue.

19                  CHAIRMAN BECHHOEFER: That's correct.

20                  MR. EVANS: That's what is before the court.  
21 Now, one thing having to do with this question of policy, I  
22 think it is not unimportant in adjudicating any case to  
23 know who the parties are and what their underlying purposes  
24 are. I think their credibility must be looked at in the  
25 light of their other opposition as a matter of policy to

1 the existence of a nuclear reactor.

2 Now, when it comes to policy, the problem with  
3 their position -- and I think this is a good starting point  
4 -- is looking at the Atomic Energy Act of 1954. The  
5 problem with their policy position is that the Congress of  
6 the United States of America has weighed the pros and cons  
7 of nuclear energy and they have come down and made the  
8 decision binding on all of us in favor of nuclear research.  
9 For example, I would refer to the purpose of the nuclear --  
10 the Atomic Energy Act. It is in Section 42-20-13. The  
11 purpose of the chapter is to provide for a program of  
12 conducting, assisting and fostering research and  
13 development in order to encourage maximum scientific  
14 industrial progress. Another section I would like to read  
15 because I think these are load stars which should permeate  
16 this entire proceeding. It states that the Commission is  
17 authorized to issue licenses to persons applying for  
18 research and development activities and also -- I note with  
19 a little interest and a little humor -- it also states that  
20 the Commission is directed to oppose only such minimum  
21 amount of regulation of the licensee -- We've gone far  
22 beyond that, of course -- as the Commission finds will  
23 permit the Commission to fulfill its obligations under this  
24 chapter to promote the common defense and security, which  
25 isn't really involved here, and to protect the health and

1 safety of the public and permit the conduct of widespread  
2 and diverse research and development.

3 Now, we have -- One of the commenters pointed  
4 out why nuclear energy. I can give a real, very direct  
5 answer, which is involved with the Georgia Tech reactor.  
6 That's medical research. Cancer research. This is a very  
7 vital field of research to date. So it is very much in the  
8 public interest, if you want to argue public interest, to  
9 have a research facility as Georgia Tech. It shouldn't be  
10 limited to Georgia Tech, as the University of Virginia, MIT  
11 and the other colleges which operate reactors quite  
12 commonly in urban areas. This is a policy decision. The  
13 problem with GANE's position is that it is contrary to the  
14 United States Congress has decided, and with the utmost  
15 respect, I think that when this court makes an adjudication  
16 it should take into consideration the policy of the supreme  
17 court of the Congress of the United States to foster, not  
18 thwart, research.

19 Now, the interesting point about this case is  
20 really that it has had its genesis in litigation which  
21 started in 1988 when there were indeed very severe  
22 management problems at the reactor. In 1988. These  
23 problems ended up in litigation, a so-called whistle-blower  
24 case, a bogus whistle-blower case, I might say, where  
25 certain technicians finally had to be let go because they

1     were on the verge of sabotaging the operation. I mean,  
2     they were acting badly. There was a severe management  
3     problem with respect to the leadership of the Health  
4     Physics wing. The actions take then, oddly enough, I  
5     thought they had ended with the litigation where Georgia  
6     Tech prevailed in the district court. It went to the 11th  
7     Circuit. The 11th Circuit affirmed. I thought that had  
8     ended the matter of what we still find here to be perhaps  
9     one of the key issues, and that is the reorganization of  
10    Georgia Tech in 1987, whereby there were several changes  
11    made. One change was to take two committees with  
12    overlapping jurisdiction and combine them into one  
13    committee, the Nuclear Safeguards Committee, which exists  
14    today.

15               The other major change had to do with the  
16    reporting structure of the Health Physics unit. At that  
17    time there was -- the system was that the Health Physics  
18    unit did not report to the director of the Georgia  
19    Institute of Technology. Now, there are two basic ways of  
20    operating a nuclear reactor. One way is to have the  
21    director as the person chiefly responsible and have both  
22    operations, reactor operations and the Health Physics unit,  
23    reporting to the director. That's one. It's a viable  
24    approach. The other viable approach is to have the Health  
25    Physics unit reporting to someone higher up the chain of

1     command than the director. That's also a viable approach.  
2     There are two approaches, probably you'll find in the  
3     energy plants where there is a lot more at risk, the  
4     reporting is more apt to be to the director of the plant.  
5     In colleges you probably find a higher proportion, not  
6     exclusively, where the reporting goes above the director to  
7     a higher administrative level. The problem, you know, you  
8     have theory, and I think you can argue it either way as to  
9     theory, and it was very controversial at Georgia Tech, this  
10    particular reorganization. Extremely controversial.

11                 The thing that's important here and what was  
12    involved in litigation is that the old system, regardless  
13    of theory, wasn't working. It was a disaster. That's one  
14    point. The second point is, under the technical  
15    specifications of Georgia Tech, the director was  
16    responsible for all aspects of the nuclear reactor  
17    operations, including Health Physics. Well, I don't think  
18    one has to go through an MBA program to recognize that  
19    there is something kind of kooky about having a person  
20    responsible for a component which does not report to him or  
21    over which he has no control. How can he be responsible?  
22    This was the management problem which Georgia Tech faced in  
23    1988. It was resolved by doing several things. The Health  
24    Physics unit, quite candidly, was sub-par in education.  
25    Two of the so-called health physicists were really



1 technicians, didn't really have a bona fide college degree  
2 at all. One, I think, had no -- One had flunked out or  
3 washed out of a HP program at Georgia Tech. The other had  
4 some sort of mail order degree from a college in New York  
5 which he had never attended. I don't really understand  
6 that, but there wasn't a bona fide degree on the part of  
7 either health technician and the same goes for the head of  
8 the unit, the manager of the Office of Radiation Safety at  
9 that point in time, had a degree in math, a bachelor's  
10 degree, but had absolutely no formal education. One of the  
11 purposes of reorganization was to upgrade and get a  
12 doctorate level to head up the so-called MORS program, or  
13 Manager Office of Radiation Safety. One of the first that  
14 were pulled in after the reorganization, for very good  
15 reasons, was a former NRC inspector, Dr. Betty Revsin, who  
16 performed yeoman service in reducing the number of  
17 violations and there have -- you know, after she came  
18 aboard. And we currently have a Dr. Ice who is also a  
19 health physicist, up through the doctorate level. So we  
20 increased the management ability and level of management in  
21 HP which was directly affected by putting in more qualified  
22 people.

23 Now, also we went through a very severe  
24 training program for the reactor operators. There were  
25 deficiencies on the operations side as well. Although I

1 would say the preponderance was the other way, was Health  
2 Physics. In any event, this came to a head, both the  
3 firing of the two so-called whistle blowers, who actually  
4 had been planned to be replaced long earlier, but it came  
5 to a head when there was a cadmium spill, which essentially  
6 was of not -- wasn't serious in the sense, as I understand  
7 it, you would have had to have stood on the place where the  
8 cadmium fell, where the spill was registering for  
9 approximately three hours to get the equivalent of a chest  
10 x-ray. And who is going to stand in one spot for three  
11 hours in a nuclear reactor? However, the reporting and the  
12 behavior of the health physicist was atrocious. No way  
13 around that. And as a result the first thing the NRC did  
14 was suspend the license for -- I think it was irradiate of  
15 a certain type of experimentation. The president of  
16 Georgia Tech was upset and within about a month he had  
17 closed all nuclear reactions. That was done by the  
18 president of Georgia Tech. At which point the NRC put in a  
19 confirmatory order, basically affirming what the president  
20 of Georgia Tech had done.

21 As a result of the closing down or shutdown  
22 many, many actions were taken. The reorganization had  
23 already restructured and was already in place. The entire  
24 Health Physics staff was in essence replaced by qualified  
25 people, highly qualified people, as far as a director, and

1 within a very brief period of time, as these things go,  
2 eleven months, the Georgia Institute of Technology was  
3 given the authority by NRC to resume operations.

4 Now, I would say that the cadmium spill was a  
5 level three. I don't have to go into the gradations of the  
6 violations, but it was a level three. That was the first  
7 level three and only level three during Dr. Karam's tenure  
8 at Georgia Tech. I'm not certain whether there were any  
9 before 1983, but certainly this is the only one before or  
10 after. The evidence will show that all of the matters that  
11 NRC was concerned about in connection with the cadmium  
12 spill and the shutdown were indeed remedied to the  
13 satisfaction of NRC. The reactor did start again.  
14 Notwithstanding the litigation going on in the courts, the  
15 reactor did start, and from that day to this there have  
16 been no violations other than four or five minor  
17 violations, which I think the testimony will show there is  
18 virtually no way a reactor can be operated for any length  
19 of time without a four or five violation. A lot of these  
20 violations have to do with record keeping. Many of them  
21 have no direct impact on safety, nuclear safety, but I  
22 would concede they are important because lot of times they  
23 could grow into something if not rectified. So I am not at  
24 all criticizing NRC for finding violations what might to  
25 some people seem piddley matters or picky matters because

1 it is important to nip even minor things at the bud. So  
2 you will have four and five regulations. I think you will  
3 hear that from the lips of Dr. Copcutt who is at the  
4 University of Virginia. They have violations there, and I  
5 think you will hear that from Dr. Karam. I think you will  
6 hear that from anybody who is familiar with a reactor that  
7 minor violations will happen because, after all, they are  
8 run by people. You can have all sorts of mechanical and  
9 physical safeguards on the major components, like automatic  
10 flooding water, things to take care of the nuclear reactor  
11 malfunction, but you can't, where things are required to be  
12 done by hand, hand calculators, or people writing down  
13 notes on a survey, there's no way in the world you can  
14 prevent human beings or require human beings to be perfect.  
15 We'd like them to be perfect, but they never will,  
16 regardless of the level of their education.

17 In any event, the problems that we are hearing  
18 today were resolved by NRC in Georgia Tech's favor in 1988  
19 with reorganization. Since that time we have not had any  
20 incident or a death or any bodily injury that we are aware  
21 of. I suppose some people can take the view that any  
22 radiation is harmful. That's not real, since radiation is  
23 everywhere in the world. I think in parts of India where  
24 you have thorium deposits and I think you get up to 10,000  
25 counts per minute, and people seem to go on contentedly.

1           I think the evidence will show that the Tech  
2 reactor is what is known as a clean reactor, which means  
3 that normally the background -- the radiation is background  
4 or lower. In other words, if you are standing next to a  
5 concrete wall, you have certain radiation emanating from  
6 the concrete wall. You have more in the mountains than  
7 you do at the sea coast. And in the area, the radiation at  
8 Georgia Tech is normally no more than background radiation.  
9 I think the evidence will show that. I think the evidence  
10 will show that the -- When the time came up for -- When the  
11 time came about for Tech to renew its license, it was  
12 advised of what to do. It did exactly what it was obliged  
13 to do, put in all the safety analysis reports, put in  
14 everything it was required to put in, all the documents are  
15 in order. As I understand it, NRC contracts out to a  
16 private review of the materials sent in. The only contacts  
17 we've had have been very minor and Georgia Tech has agreed  
18 to everything that has been suggested.

19           There is simply no valid reason to decline  
20 Georgia Tech's license. It has not had any injuries. If  
21 we want to go around the so-called Chicken Little's of the  
22 world and worry about the sky falling in, why not ban the  
23 automobile. After all, if we go back to the horse and  
24 buggy -- No one has been killed at Georgia Tech. How many  
25 people have been killed in Atlanta this year by the

1     automobile.   Why not ban the automobile and go back to a  
2     horse and buggy?

3                 Now, nuclear energy is here to stay.   That's  
4     the real world.   If we can put a person on the moon, we can  
5     certainly find ways of handling nuclear energy safely.   I  
6     think that -- I live in Atlanta too.   I don't want a  
7     Chernobyl in Atlanta.   I think, of course, we are talking  
8     about the size of Georgia Tech's nuclear reactor.   It's not  
9     an energy reactor.   That's not a realistic scenario in any  
10    event, but the point is there is absolutely no evidence of  
11    management doing anything that is unsafe.   There is no  
12    evidence that the facility is not being run -- that has not  
13    been run with any problem, any major problem for at least  
14    since the cadmium spill which was rectified to NRC's  
15    satisfaction in 1988.   There's simply no valid reason for  
16    no executing what Congress says is the desirability of  
17    conducting research, including cancer research, for the  
18    benefit of all the public simply because of some remote  
19    possibility that something might happen, which is not part  
20    of the real world.

21               MR. TEEPER:   Is it still appropriate to speak?

22               CHAIRMAN BECHHOEFER:   Yes, it is.   We  
23     interrupted because no one seemed to wish to, so...

24               (Whereupon, a recess was taken for the  
25     purpose of taking limited appearance testimony,



1 after which the hearing continued.)

2 CHAIRMAN BECHHOEFER: Ms. Carroll, it is time  
3 for your opening statement.

4 MS. CARROLL: Thank you. Well, being  
5 unfamiliar with the process, I'm Glenn Carroll. I'm  
6 representing GANE, Georgians Against Nuclear Energy. I am  
7 an artist. I have done this as a volunteer for 20 months.  
8 So... Gee, I thought I'd be a witness, and then you told  
9 me that I could read my entire discovery response if I  
10 wanted to, and then I thought, naw, it will all come out.  
11 And Turk said -- and I won't hold him to this -- that he  
12 would be saying about a paragraph. We're all very  
13 friendly, you know. And I was wrapped with interest over  
14 Mr. Evan's approach and I guess I'm going to be somewhere  
15 in the middle of all of this.

16 First I have a question. Is anyone here from  
17 Georgia Tech who is not invested somehow or other in this  
18 process?

19 \*\* Okay. You don't want to speak? Is there  
20 anyone from Georgia Tech --

21 ADMINISTRATIVE LAW JUDGE KLINE: This is not  
22 the time for that.

23 CHAIRMAN BECHHOEFER: No, their statement has  
24 been concluded. They --

25 MS. CARROLL: No, what I want to know is, we

1 have the director of the reactor and his attorneys and a  
2 fellow representing the public relations department. Is  
3 there anybody from Georgia Tech that can listen with an  
4 open mind here?

5 (No response)

6 (Laughter)

7 MS. CARROLL: Too bad. I would like Georgia  
8 Tech to hear what is going on here because everything may  
9 not be able to be solved by our panel of judges and there  
10 might be problems that should be heard about.

11 You don't want to pull out? You don't want to  
12 withdraw your license renewal request?

13 (Laughter)

14 MR. EVANS: We think not today.

15 MS. CARROLL: Okay, last chance.

16 (Laughter)

17 MS. CARROLL: I'm not sure it's that easy  
18 either. I mean, once you got the whole party assembled. I  
19 mean, it's pretty easy -- pretty hard for the bride to pull  
20 out if she has second thoughts.

21 What we are going to show you over the next  
22 several weeks, we're volunteers. We've had to fight tooth  
23 and nail. We don't even have a public document room in  
24 this town. It's been set up so late, I've been fighting  
25 for the Rebecca Long documents and trying to read them.

1 And now it's a trap. You can't even use what you learn in  
2 there unless you can funnel it through your friendly  
3 lawyers. So this public document room now -- Everything  
4 we've found out we've had to wrestle and find and look  
5 under rocks for, and we have found out a lot and we have  
6 found out that there is a management problem that runs from  
7 the director up through his chain of command. I'm not  
8 going to blame the director. The whole reactor personnel,  
9 up the chain of command through their committee that's to  
10 balance them and assist them to do this safely, through  
11 their vice president of research to which they respond next  
12 up to the president of the university and to the regulators  
13 who have to bring more to this than the president of the  
14 university possibly can. Why would the reactor personnel  
15 there know that the NRC means business. You will hear a  
16 lot about this in the upcoming weeks.

17 We -- This is a public hearing. Unfortunately  
18 Georgia Tech is not really here to hear us. The public is  
19 here to hear us. The press is here to carry our message.  
20 Maybe Georgia Tech will read the news reports. Certainly  
21 the public at large can hear. This is a public hearing.  
22 We have things to say, things that need to be heard.

23 One thing that I ran into a lot in the course  
24 of talking to people to see who we could call for  
25 witnesses, how we could build our case was that gee whiz,

1 well, they ain't using the reactor but it's a lot cheaper  
2 to operate it than it is to decommission it. Is the  
3 Honorable Doug Teeper still here? Well, if they want to  
4 decommission it, they will be asking the Board of Regents  
5 for \$10 million. That was 1964 dollars. I dare say it's  
6 probably 20 million.

7           The one thing we want people to hear is we  
8 think there is another option between operating and de-  
9 commissioning. We think there is another option for  
10 Georgia Tech. We beg you, don't lose interest in this  
11 issue. It's been fifty years. We need a nuclear waste  
12 option. Don't go away. Don't close that department.

13           I got some ideas from listening to Al Evans  
14 trash the opposition and the only argument I heard for the  
15 continued operation of the reactor is cancer research, and  
16 we have a witness who will talk to you from an educated  
17 point of view as to whether their idea for cancer research  
18 is -- Well, we'll hear more about the merits of that and  
19 the -- and a reality check on whether Georgia Tech maybe  
20 can really even pull that off.

21           I'd like to point out that since one of our  
22 witnesses, Mr. Boyd, left, they haven't been able to hold a  
23 radiation safety officer or manager of operations safety.  
24 It's really hard to even track the comings and goings.  
25 There's all these brief little periods. It's hard to even

1 get the sequence right.

2 I'd also like to point out and beg you to, even  
3 if it is not your jurisdiction, the areas that have been  
4 committed with x-ray machines and Cobalt 60. Since we  
5 started this process in October of '94, even with the whole  
6 world watching, they can't get it right. And I hope you  
7 will at least accept the pattern of errors that is evident  
8 in their mishandling of other aspects of the radiation  
9 program. Their attitude towards safety, towards  
10 regulations. Last week the Cobalt 60 was moved on state of  
11 Georgia streets improperly. Without the proper paperwork  
12 and without the proper contractors performing it with  
13 plenty of input on how it should be done. Torpedoes be  
14 damned. It was moved. Apparently there was no incident.  
15 This was last week. This was Friday. It is a cultural  
16 problem. It's an attitude problem.

17 Another couple of observations I'm inspired to  
18 make by Mr. Evans' testimony is in 1954 he referred to the  
19 Atomic Energy Act, and of course, because of the conflict  
20 of interest of promoting nuclear energy and regulating it,  
21 we now have the Department of Energy in the Nuclear  
22 Regulatory Commission, but in 1954 when that was drafted,  
23 we were doing radiation experiments on humans in this  
24 country. I hope we've all acknowledged how far we have  
25 grown beyond that as a society in our country.

1                   He also referred to -- Well, I made a note of  
2 my idea more than I made a note of what he actually said.  
3 He spoke of how there's been no problem, no contamination  
4 to the public and yet last year in 1995 he spoke of how  
5 there had been no contamination of the public, no radiation  
6 at least, and last year in 1995 the NRC --

7                   MR. EVANS: I will have to object. I did not  
8 say anything remotely like that. I said no deaths. I said  
9 no serious bodily injury. I did not say there was never  
10 the slightest wisp or hint of some discharge. I mean, I  
11 couldn't say that.

12                  ADMINISTRATIVE LAW JUDGE KLINE: We have it on  
13 the record, sir, and these are just opening statements.

14                  MS. CARROLL: What I made a note of, I believe  
15 it was Inspection Report 9504, but we'll bring that out  
16 later, but last year the NRC cited a violation to Georgia  
17 Tech because their monitoring for the last ten years has  
18 been absent, has been wrong. We don't know if they've  
19 contaminated the city, but they can't claim they haven't.  
20 They have no back-up, no basis for that statement.

21                  So, I've made my plea about nuclear waste.  
22 I've made my observation, we don't have to decommission it,  
23 and we certainly don't have to operate it, and the next  
24 weeks will be very interesting and we believe that you will  
25 be convinced there is a pattern of mismanagement there, and



1 you will be compelled to decide in the public of Atlanta's  
2 favor to deny the license renewal, and I thank you very  
3 much.

4 CHAIRMAN BECHHOEFER: Mr. Turk or --

5 MR. TURK: Thank you, Your Honor.

6 CHAIRMAN BECHHOEFER: -- Ms. Woodhead, as the  
7 case may be. Who is making the opening statement?

8 MR. TURK: Your Honor, I'm here today on behalf  
9 of the NRC Staff. As you are aware, the Staff has  
10 presented three sets of prepared testimony. The first set  
11 addresses the events which took place at this reactor in  
12 the '87 to '88 time frame. The second set of testimony  
13 addresses the events which took place at the reactor  
14 subsequent to restart in 1988 or subsequent to the  
15 authorization of restart and the third panel talks about  
16 the organizational structure at the Georgia Tech Research  
17 Reactor and how that organizational structure compares to  
18 the standards which the staff uses to evaluate research  
19 reactor management structures.

20 The testimony of the staff, very concisely,  
21 will be that there was a serious problem at this reactor in  
22 the 1987, 1988 time frame. The staff took strong  
23 enforcement action against the reactor at that time. The  
24 reactor was shutdown. It stayed shutdown for ten months.  
25 A severity level of three violation was imposed, an

1     escalated civil penalty was imposed, doubling the fine from  
2     that which was authorized in the regulation to an amount  
3     twice as high as normally would be assessed for that kind  
4     of violation, and at the same time in November 1988, the  
5     staff made a determination that corrective actions had been  
6     taken, that management changes were made and that the staff  
7     had reasonable assurance that restart of the reactor would  
8     not adversely affect the public health and safety. That's  
9     Panel A's testimony.

10             The staff's second panel of testimony states  
11     that in the period following restart, there have been a  
12     number of violations here. None of them rose to a  
13     significant severity level and looked at collectively, they  
14     do not indicate a breakdown of management controls. So  
15     that the staff is satisfied based on the operating history  
16     at Georgia Tech following restart that renewal of the  
17     license would not adversely affect the public health and  
18     safety.

19             The staff's third panel compares the  
20     organizational structure to those in place elsewhere and to  
21     the standard in which the staff uses to evaluate  
22     organizational structures and concludes that the present  
23     structure is acceptable.

24             I think you will see in the next two weeks  
25     quite a bit of controversy because the witnesses who will

1 be appearing before you have been involved in disputes  
2 amongst themselves in the past. Unfortunately I think this  
3 hearing will become a forum in part for the airing of  
4 grievances which have long ago been addressed. Nonetheless  
5 I believe you will find after hearing all the evidence that  
6 the management at the reactor is adequate to assure the  
7 public health and safety in the future. Thank you.

8 ADMINISTRATIVE LAW JUDGE LAM: I have a  
9 question for Mr. Turk. Mr. Turk, Mr. Evans had stated  
10 earlier that since the cadmium spill there has not been any  
11 level three violations. Will the staff be prepared to  
12 collaborate that statement in our hearing?

13 MR. TURK: Yes, sir. The staff's Panel B  
14 testimony lays out each and every violation which has been  
15 found. I believe there are a total of 13 -- right?

16 MR. MENDONCA: Seventeen violations. Thirteen  
17 reports.

18 MR. TURK: Thirteen inspection reports in which  
19 there were seventeen violations and seven non-cited  
20 violations. None of those rules (sic) above the level of  
21 severity level four.

22 And I thank Mr. Mendonca for the information.

23 CHAIRMAN BECHHOEFER: Let me ask also, would  
24 the staff be prepared to address -- It's my impression that  
25 at one point the -- what used to be Appendix C, now I guess

1 is just a statement of policy, provided for combining a  
2 bunch of level four violations into either level three or  
3 level four where civil monetary penalties were authorized  
4 to be imposed. We would like for one of the staff  
5 witnesses for the appropriate time period -- and that might  
6 be almost to the present because there have been a number  
7 of fours, this never applied for fives, but for fours --  
8 will the staff -- or could the staff witnesses be prepared  
9 to discuss why civil monetary penalties were not imposed  
10 for a number -- the number of level fours that were cited  
11 or non-cited violations, for that matter, if those  
12 violations might have been at the four level. Those are  
13 some of the questions that I wanted to ask, and just as  
14 soon have your witnesses prepared to answer those when they  
15 get here.

16 MR. TURK: All right. I think you are right.  
17 The witnesses are the proper persons to address that.

18 CHAIRMAN BECHHOEFER: That's correct. That's  
19 correct.

20 MR. TURK: And I will apprise them of your  
21 question and see that they are able to respond.

22 CHAIRMAN BECHHOEFER: It might help them if  
23 they know ahead of time what they are going to be asked.

24 MR. TURK: I think you will see a hint of that  
25 in the Panel B testimony when the panel speaks about the

1 collective significance of the violations and CPs that were  
2 issued, but I will bring this particular question to their  
3 attention.

4 CHAIRMAN BECHHOEFER: All right. I think at  
5 this stage perhaps we should break for lunch and have Dr.  
6 Copcutt as close to 1:00 -- We could restart at 1:00, and  
7 nobody be late so that we could then start with Dr. Copcutt  
8 as soon as possible. I know he's got time constraints  
9 because of travel plans and that kind of thing. So, unless  
10 there is some reason why the parties suggest we not break  
11 at this time, I think we will break for lunch and resume  
12 promptly at 1:00.

13 (Whereupon, a luncheon recess was taken.)

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1                                    AFTERNOON SESSION

2                    CHAIRMAN BECHHOEFER: Back on the record. I  
3 guess, Ms. Carroll, are you ready to present your witnesses  
4 --

5                    MS. CARROLL: Yes.

6                    CHAIRMAN BECHHOEFER: -- or your witness at  
7 least for this afternoon.

8                    MS. CARROLL: This will be my first -- of  
9 anything. Do I call Dr. Brian Copcutt to the stand?

10                   CHAIRMAN BECHHOEFER: Yes.

11                   MS. CARROLL: Dr. Brian Copcutt, will you  
12 please take the stand?

13                   Now, I have an idea to facilitate what I think  
14 will be needed for the distribution of documents as well as  
15 -- so I won't feel so remote from the stand, and this might  
16 be something that everybody would be comfortable with. I'd  
17 like to sit here --

18                   CHAIRMAN BECHHOEFER: That's okay.

19                   MS. CARROLL: -- and if I can work it out with  
20 the court reporter, if you would like to reorient your  
21 microphones so it picks me up --

22                   THE REPORTER: You're fine.

23                   MS. CARROLL: You can hear me, can't you?

24                   THE REPORTER: I can hear you fine. You're  
25 wonderful.



1 MS. CARROLL: Dr. Copcutt, he has such  
2 important testimony and this will be my first time  
3 examining anybody, anytime, anywhere. I hope we bring it  
4 out.

5 CHAIRMAN BECHHOEFER: We'll have to --  
6 Whereupon,

7 BRIAN COPCUTT

8 appeared as a witness herein and having first  
9 been duly sworn, was examined and testified as follows:

10 MS. CARROLL: Thank you for agreeing to fly  
11 across the country and take time off from work.

12 Dr. Copcutt furnished his resume to us.

13 DIRECT EXAMINATION

14 BY MS. CARROLL:

15 Q Is that your resume and qualifications?

16 A Yes. Current.

17 MS. CARROLL: I think this is how you would  
18 like to proceed. We have copies for everybody. I would  
19 like to ask him maybe about some of the high points.

20 CHAIRMAN BECHHOEFER: You'd better distribute  
21 them first so people can look at it.

22 MS. CARROLL: Okay.

23 CHAIRMAN BECHHOEFER: We had thought actually  
24 that you were going to submit the resume in advance, but be  
25 that as it may --

1 MS. CARROLL: That might have been regular, but  
2 that's not what I did. I see my copy service gave it to us  
3 in two pieces -- or maybe their bilingual copy machine  
4 thought that's what it was supposed to do. I think this  
5 would be for you and for evidence.

6 CHAIRMAN BECHHOEFER: You know, you could have  
7 Mr. Johnson help distribute your copies if you want to.

8 MR. JOHNSON: I would be happy to.

9 CHAIRMAN BECHHOEFER: That might save some  
10 time.

11 This will be GANE Exhibit 1.

12 MS. CARROLL: How do we do that. See, I didn't  
13 know what sequence exactly they'd come out in.

14 CHAIRMAN BECHHOEFER: That's all right. Do  
15 them as they are offered.

16 MS. CARROLL: Everybody can write GANE Exhibit  
17 1 on this.

18 THE REPORTER: I need three copies.

19 MS. CARROLL: That's right.

20 Now, don't get bored, Dr. Copcutt. I think it  
21 might be tedious, but pace yourself.

22 This would be GANE Exhibit 1. Rob, would you  
23 mark our copy GANE Exhibit 1. Of course, Dr. Copcutt is  
24 using that copy, which is probably appropriate. This is  
25 how regular lawyers do, right?

1 (The document referred to was marked  
2 for identification as GANE Exhibit  
3 No. 1.)

4 MS. CARROLL: Now, Dr. Copcutt, as he should be  
5 is looking at the copy I could be using, but I'll try to  
6 bridge this gap here.

7 BY MS. CARROLL:

8 Q Dr. Copcutt, you have a doctorate degree.  
9 Would you please tell us about your college education?

10 A I have a Ph.D in bio-engineering with a  
11 specialty in medical health physics from Texas A&M  
12 University College Station, 1983; master's degree in bio-  
13 medical engineering, a specialty in radiological physics,  
14 University of Virginia, 1977, and a bachelor's degree from  
15 the University of Virginia in 1975 in Environmental  
16 Science.

17 Q Did you go to the University of Virginia  
18 immediately following your college?

19 A Yes. I got my Ph.D in '83 and went to  
20 Virginia, University of Virginia as radiation safety  
21 officer for the entire university.

22 Q And did you hold any other positions during  
23 your tenure at the University of Virginia?

24 A I also was a lecturer, just a coincidental  
25 title with radiation safety officer, and later in the last

1 year at my -- at the University of Virginia, I transferred  
2 to the Medical Center and was a medical physicist there.

3 Q I see that you are very active in your  
4 community in the health physics community. You are a  
5 member of many associations.

6 A Yes. In fact, past president of Virginia  
7 Chapter of Health Physics -- Health Physics Society.

8 MS. CARROLL: Okay, now, it's going to take me  
9 a while to get a feel for it. Can I use your ledge here?  
10 I think I just gave you my pen. I need another pen.  
11 Thanks.

12 In fact, we have an exhibit that we will  
13 distribute. I think this will be more regular.

14 BY MS. CARROLL:

15 Q Is this your --

16 A Board certification by the American Board of  
17 Health Physics.

18 MS. CARROLL: I should have brought you a copy  
19 and I didn't. So we'll just work with that. I want to  
20 keep track of this too because this is going to be our  
21 verification.

22 This is GANE Exhibit No. 2, and it is Dr.  
23 Copcutt's American Board of Health Physics certification.

24 (The document referred to was marked  
25 for identification as GANE Exhibit

1 No. 2.)

2 MS. CARROLL: This is GANE Exhibit 2.

3 CHAIRMAN BECHHOEFER: When you are through  
4 questioning on qualifications, you should move that these  
5 exhibits be put into evidence. You have to move each  
6 exhibit into evidence.

7 MS. CARROLL: I move that GANE Exhibit 1 and 2  
8 be moved into evidence.

9 MR. TURK: No objection from the staff, Your  
10 Honor. I would ask if I ever forget to move an exhibit in,  
11 please have someone remind me also.

12 CHAIRMAN BECHHOEFER: I will try.

13 (Laughter)

14 MS. CARROLL: We don't want to stand unduly on  
15 formality except when it comes to safety.

16 CHAIRMAN BECHHOEFER: Okay. GANE Exhibits 1  
17 and 2 are admitted into evidence.

18 (The documents marked as GANE Exhibit  
19 Nos. 1 and 2 were admitted into  
20 evidence.)

21 BY MS. CARROLL:

22 Q I have here two letters that we would like to  
23 move into evidence, and they appear to be from Georgia Tech  
24 to you and they are almost a year apart and they offer you  
25 quite a handsome increase in salary. Do you recognize

1 these letters?

2 A Yes. They were offering me positions in 1989  
3 and 1990 at Georgia Tech.

4 MS. CARROLL: I move we put these in either as  
5 Exhibits 3 and 4 or Exhibits 3, if you can keep them  
6 together. They are sort of one thing. I move that we put  
7 these two letters in as one exhibit, GANE Number 3.

8 MR. TURK: For sake of clarity, it might be  
9 easier when we refer to these documents to give them a  
10 different exhibit number.

11 MS. CARROLL: Okay. So GANE number 3 and GANE  
12 number 4, and the '89 letter would be number 3 and the 1990  
13 letter would be number 4.

14 (The documents referred to were  
15 marked for identification as GANE's  
16 Exhibit No. 3 and 4.)

17 MS. CARROLL: Would it be quicker if Rob was  
18 doing this, do you believe?

19 CHAIRMAN BECHHOEFER: Yes, I believe I do.

20 MS. CARROLL: I think maybe we'll let you start  
21 stomping around up here, and you'll track it I suppose by  
22 what we call it. Here's your Exhibit 3 and here's your  
23 Exhibit 4. I could be marking them, I suppose. Can't wait  
24 to see someone else do this so I can imitate the rhythm.

25 CHAIRMAN BECHHOEFER: Which number is which?



1 MS. CARROLL: The 1989 letter would be number 3  
2 and the 1990 letter would be number 4.

3 CHAIRMAN BECHHOEFER: Okay.

4 MS. CARROLL: I'm going to move to put this  
5 now, but I need to show it to Dr. Copcutt I believe.

6 BY MS. CARROLL:

7 Q It looks to me like your letter of acceptance?

8 A Yes, it is, April 6th, 1990.

9 MS. CARROLL: And so this is Dr. Copcutt's  
10 letter of acceptance. It would be GANE Exhibit No. 5, and  
11 we move to enter it into the record.

12 (The document referred to was marked  
13 for identification as GANE Exhibit  
14 No. 5.)

15 MS. CARROLL: Okay, now. That, I think, sort  
16 of dispenses with the preliminary a little bit, but Dr.  
17 Karam -- Excuse me -- Would you say that the exhibits we've  
18 put in -- Let's see now. Can I put words in the witness's  
19 mouth or do I have to play 20 questions.

20 MR. MENDONCA: That's called leading the  
21 witness.

22 MS. CARROLL: Let's get an objection out here.

23 MR. EVANS: On introductory and formalities, I  
24 personally won't object to leading questions, if it will  
25 expedite things. On formality, introductory materials.

1 MS. CARROLL: Okay. Let me try this on and see  
2 how this feels to everybody.

3 BY MS. CARROLL:

4 Q The foregoing exhibits we've put in have given  
5 GANE the impression that your qualifications are well  
6 regarded in your community, that you were sought after by  
7 Georgia Tech and would you agree with that statement?

8 A I was sought after since they raised the offer  
9 one year from the next.

10 Q Did you -- Were you aware of the problems --  
11 Were you aware of the cadmium accident at the time you were  
12 approached by Georgia Tech?

13 A Yes, I think most people active in the U.S.  
14 health physics community were familiar with that accident.  
15 I wasn't familiar with every detail, but I did know about  
16 it generally.

17 Q Was it part of your process or part of your  
18 evaluation process to decide to go there? Did you  
19 consider that?

20 A Yes, in a way. I considered that -- I knew  
21 that after that the reactor got shutdown for 10 months and  
22 I felt it was -- the reactor was looking for someone to  
23 come in and help straighten things out and -- after that  
24 incident had occurred.

25 Q Did you feel up to the job?

1           A       Yes, I did.

2                   MS. CARROLL: Is it acceptable to enter several  
3 exhibits simultaneously if they sort of make sense in the  
4 line of questioning as a group?

5                   CHAIRMAN BECHHOEFER: Yes, you can identify  
6 them first, ask questions about them, and then move to  
7 introduce them later on.

8                   MS. CARROLL: Oh, that ought to be --

9                   CHAIRMAN BECHHOEFER: That's often done.

10                  MS. CARROLL: -- tidy.

11                  CHAIRMAN BECHHOEFER: I don't know if it is  
12 tidy, but you identify exhibits and then they are either  
13 admitted or not admitted. Sometimes it depends on the  
14 context about which questions are asked about those  
15 exhibits.

16 BY MS. CARROLL:

17           Q       This is what I'm looking at is this document.  
18 Actually I'm sort of bypassing this one for now.  
19 GANE found in a file that Georgia Tech had kept on you  
20 several -- let's see, dated July 24, 1990, two days later,  
21 July 26, 1990, including a follow-up memo from the director  
22 of the reactor on that inspection and then on August 3rd we  
23 found what I guess -- are these your reports on your  
24 inspection findings or --

25           A       Yes. Those are memos from myself to Dr. Karam

1 concerning my findings about radiation safety matters,  
2 different radiation safety matters at the reactor and also  
3 on campus.

4 Q I would like to ask you to talk more about  
5 them. One of them appears to be -- Would you talk about  
6 the first one please? About the bell tripper placement?

7 CHAIRMAN BECHHOEFER: Could you distribute them  
8 to us first?

9 MS. CARROLL: Okay.

10 CHAIRMAN BECHHOEFER: And everybody else so  
11 we'll know what you are asking questions about.

12 MS. CARROLL: I move --

13 CHAIRMAN BECHHOEFER: Don't move them until  
14 you've asked some questions about them.

15 MS. CARROLL: Oh.

16 ADMINISTRATIVE LAW JUDGE KLINE: Just pass them  
17 out.

18 CHAIRMAN BECHHOEFER: You identify them as a  
19 certain number and then you will move later on after we've  
20 heard the witness describe them or testify about them.  
21 Then you move to put it into evidence as one of your  
22 exhibits. But you usually identify them as a particular  
23 number when you question with the exhibit.

24 MS. CARROLL: And then you move to enter them.

25 CHAIRMAN BECHHOEFER: After the testimony on

1     that particular document is done. Either that or you could  
2     move to admit a lot of them later on. That's often the way  
3     lawyers handle it. But relevance and pertinence to the  
4     question is always a question concerning admissibility.  
5     You establish that by asking the witness certain questions  
6     about those documents and then later on you can move to  
7     admit them. You may hear either objections or not as the  
8     case may be, but any ones that you identify which are not -  
9     - should end up not being admitted, travel with the record.  
10    So if you have an appeal and you think a mistake has been  
11    made, if one is kept out, you can appeal that then. That's  
12    how the record is kept.

13                 MS. CARROLL: So, if I was paying attention to  
14    my illustrious professor, Judge Bechhoefer, the July 24th  
15    filter replacement, that would be GANE Exhibit No. --

16                 CHAIRMAN BECHHOEFER: Six.

17                 MS. CARROLL: Six. I would ask that the July  
18    26th inspection be GANE number 7. The director's response  
19    memo be GANE number 8, and the other one, the August 3rd be  
20    GANE number 9.

21                         (The documents referred to were  
22                         marked for identification as GANE  
23                         Exhibit Nos. 6, 7, 8, and 9.)

24                 MR. JOHNSON: We're one short.

25                 MS. CARROLL: Well, we'll just have to deal

1 with that. I would say short the reporter and we'll catch  
2 up with him later.

3 THE REPORTER: Don't short the reporter. These  
4 have got to be in the transcripts. I've got to have  
5 copies.

6 MR. TURK: Can we go off the record for a  
7 moment?

8 CHAIRMAN BECHHOEFER: Yeah, let's go off the  
9 record.

10 (Off the record discussion.)

11 CHAIRMAN BECHHOEFER: Ready to go back on the  
12 record.

13 It might help when you question the witness to  
14 do each one separately. Just to help keep the record  
15 straight.

16 MS. CARROLL: He'll catch me. He'll call me on  
17 it if we don't keep it straight.

18 Are you ready?

19 THE WITNESS: Yes.

20 BY MS. CARROLL:

21 Q I'd like to talk about the July 24th  
22 replacement of the moving air particulate monitor  
23 detector -- rather I would like you to talk about it. If  
24 you would please describe to us what you were dealing with  
25 there and how you dealt with it.



1           A       This is a memo concerning malfunction and  
2   repair or replacement of a moving air particulate monitor  
3   designed to detect radioactive particulates in the reactor  
4   containment area. It's a pretty routine memo in that we  
5   observed that the monitor was malfunctioning giving  
6   spurious counts that were too high, replaced the detector,  
7   did tests that established that the replacement was  
8   adequate and indeed it turned out to be better than the  
9   original and then we did the -- attached the appropriate  
10  forms in order to clear the replacement in terms of safety  
11  evaluation.

12           Q       And you had not been there very long when you  
13  did this. You started --

14           A       July 2nd is when I started.

15           Q       Uh-huh (affirmative). Now, a couple of days  
16  later you performed an inspection that's indicated in GANE  
17  Exhibit Number 7. The subject was facility high radiation  
18  areas. Would you tell us a little bit about that please?

19           A       Yes. This memo, again to Dr. Karam, outlines  
20  or presents my findings in a survey that I had performed  
21  throughout the facility previously. The survey turned up  
22  several -- three areas which I thought qualified as high  
23  radiation areas under federal regulations. Therefore, I  
24  pointed these areas out. Some of these -- Sometimes these  
25  areas are subject to interpretation since the rules aren't

1 100 percent clear, but I felt that they qualified as high  
2 radiation areas. That meant that these areas had to be  
3 controlled, posted as high radiation areas and the access  
4 to the areas had to be controlled. So I presented those  
5 findings in this memo.

6 Q And I see by GANE Exhibit Number 8 that your  
7 findings were accepted on their face, as it appeared. Do  
8 you agree?

9 A Yes. That's the response by Dr. Karam to my  
10 memo recommending that I take effective steps to remedy  
11 identified problems.

12 Q Were you able to do that in your remaining time  
13 there?

14 A Yes. I think some of the -- one of the  
15 remedies was placing an alarm system on the biomedical  
16 facility. Another, I believe, was putting in a gate to  
17 control access to another high radiation area, and a third,  
18 I think, was simply posting as a high radiation area, the  
19 area for the reactor top. So, those were implemented by  
20 myself.

21 Q I don't have a 1990 calendar, but a few days  
22 later on August 3rd, we have a fairly thick document,  
23 number 9, GANE Exhibit Number 9. Would you describe what  
24 is apparently an investigation report? Would you describe  
25 that please?

1           A       This is a memo from myself to Dr. Karam  
2       concerning contamination that I found in one of the  
3       research buildings. This was phosphorous 32 radioactive  
4       material used for lab research. It was not under the  
5       reactor license but came under the University's state  
6       license for radioactive materials. An individual was  
7       found to be contaminated. The lab area was found to be  
8       contaminated with low levels of phosphorous 32 and the memo  
9       describes in detail the contamination found, the  
10      decontamination process and the results. Then we followed  
11      up with decontamination surveys confirming that the areas  
12      were decontaminated adequately and also we followed up with  
13      bio-assays taking urine samples from the individuals  
14      involved to determine if any of them had ingested P-32. I  
15      think we found none had and in order to prevent this sort  
16      of thing from happening in the future, I presented training  
17      to these individuals who worked in this lab and that was  
18      also documented.

19           Q       Now, this looks like a pretty thorough  
20      investigation to us lay people. Did you feel it was --

21           A       Yes, it was a well documented investigation of  
22      a contamination incident.

23           Q       Now, what we were curious about having already  
24      been aware that you had been a Georgia Tech such a brief  
25      period, which is part of why we looked further, was why you

1 had such an active week shortly after you came there, and  
2 then we saw no more --

3 MS. CARROLL: Oh, wait a minute. Hold the  
4 phone. I need these exhibits be put in the record.

5 MR. EVANS: No objection to their admission.

6 MS. CARROLL: That would be 6, 7, 8, and 9.

7 MR. TURK: No objection from the staff, Your  
8 Honor.

9 MS. CARROLL: Now, let me begin again.

10 CHAIRMAN BECHHOEFER: They will be accepted --  
11 admitted into evidence.

12 (The documents marked as GANE Exhibit  
13 Nos. 6, 7, 8, and 9 were admitted  
14 into evidence.)

15 BY MS. CARROLL:

16 Q We saw this very active week from you shortly  
17 after you arrived at Georgia Tech and then there was  
18 nothing. Could you explain that please?

19 A Well, it was some time after the memo dated  
20 July 26th that describes high radiation areas that I found  
21 in the facility that Dr. Karam told me verbally that in the  
22 future I shouldn't document such findings.

23 Q And what did you say?

24 A I said, that's always the way that I've done it  
25 in the past at my previous position at the University of

1 Virginia, and documenting these things doesn't do any harm.  
2 It shows that they were found and the problems were remedy  
3 and if the NRC wants to issue violations, they can do so,  
4 but I've always -- as I said, I've always operated in the  
5 fashion of documenting things which I found, and then  
6 proceeding with the solution as determined by the director  
7 or whoever is the senior in charge.

8 Q Wasn't Dr. Betty Revsin a radiation safety  
9 office simultaneously with your --

10 A I don't think simultaneously. I think -- Maybe  
11 she did hold the title of radiation safety officer. I'm  
12 not sure.

13 Q Was she involved in this discussion between you  
14 and Dr. Karam?

15 A Not initially, no.

16 Q Did you ask Dr. Karam why he would not want  
17 documentation?

18 A Well, he indicated that things that are  
19 documented like this, this would be therefore very easy for  
20 the NRC to come in and cite as violations because we are  
21 essentially documenting that we had unlabeled or had not  
22 met the requirements for high radiation areas in three  
23 different points in the facility. So, theoretically, even  
24 though we had resolved the problems, they could be a  
25 violation in the future.

1           Q       Did you -- Would you -- Let me see how to ask  
2 this. Georgia Tech has a unique management structure as  
3 GANE understands it.

4           MR. EVANS: Objection to a leading question --  
5 leading questions at this point. I don't think counsel  
6 ought to be testifying whether something is unique or not.  
7 I have no objection to her asking the witness what he  
8 thinks about it.

9 BY MS. CARROLL:

10          Q       Would you care to comment on your personal  
11 views about Georgia Tech's management structure for the  
12 radiation safety program?

13          A       Well, I can compare it directly to the  
14 structure at the University of Virginia where I worked  
15 previously. At that University we had a completely  
16 separate radiation safety group, office, under a completely  
17 separate provost of the University to oversee radiation  
18 safety activities in our research reactor. The personnel  
19 working in the health physics office didn't work for the  
20 reactor facility. They worked for the environmental health  
21 and safety office and I think that most of their facilities  
22 have some sort of degree of greater separation between the  
23 radiation safety personnel and the operations personnel at  
24 their research reactors.

25          MR. EVANS: I object to the response on there's



1 no foundation showing where -- under what circumstances he  
2 has to compare anything other than the University of  
3 Virginia and Georgia Tech, and to say that most have, I  
4 believe that is testimony without any foundation. That's  
5 speculation or opinion without any foundation for his  
6 knowing.

7 ADMINISTRATIVE LAW JUDGE KLINE: Dr. Copcutt,  
8 do you have direct knowledge of any other system besides  
9 the University of Georgia (sic) system and University of  
10 Virginia?

11 THE WITNESS: I also worked at the Texas A&M  
12 system as a student, graduate student. They, at that time  
13 at least, had separate radiation safety group --  
14 administratively separate from the reactor -- They have a  
15 research reactor. So those -- That is the extent of my  
16 knowledge.

17 ADMINISTRATIVE LAW JUDGE KLINE: Would you say  
18 the extent of your direct knowledge then is three systems?  
19 University of Virginia, University of Georgia -- I mean,  
20 Georgia Tech, and Texas?

21 THE WITNESS: Yes.

22 CHAIRMAN BECHHOEFER: Let me elaborate a little  
23 more. Do you attend what in industry would be trade  
24 association groups which discuss matters relating to  
25 research reactors? I don't think the word trade

1 association is correct for university people, but --

2 ADMINISTRATIVE LAW JUDGE KLINE: Professional.

3 CHAIRMAN BECHHOEFER: -- professional

4 organizations or various sort, and have you got knowledge  
5 of organizations at all through those sources?

6 THE WITNESS: Well, I -- Yes, I interacted a  
7 lot with other universities, especially in Virginia, the  
8 Virginia health physics chapter and somewhat nationally.  
9 Not many universities have research reactors, but in the  
10 radiation safety program for the campus, again, most  
11 universities or colleges have a separate radiation safety  
12 office that is separate from the academic pursuits of the  
13 campus.

14 ADMINISTRATIVE LAW JUDGE LAM: No, the question  
15 really is, when you make that statement is it knowledge or  
16 is it an opinion?

17 THE WITNESS: Well, comparing the University of  
18 Virginia and Georgia Tech, it's knowledge. It's my opinion  
19 otherwise.

20 BY MS. CARROLL:

21 Q Dr. Copcutt, did you participate in -- for  
22 instance, last week there was the Southeast --

23 CHAIRMAN BECHHOEFER: Well, I definitely have a  
24 motion to act on, and we will deny that motion at this  
25 stage.

ADMINISTRATIVE LAW JUDGE KLINE: The

1 objection.

2 CHAIRMAN BECHHOEFER: The objection I should  
3 say.

4 MR. TURK: Your Honor, if I could clarify one  
5 thing. As I would frame an objection, it would not be that  
6 the man cannot form an opinion but he is not an expert to  
7 offer an opinion as to the structures in place at other  
8 reactor facilities. His direct knowledge is limited to the  
9 two universities at which he worked and perhaps the Austin,  
10 Texas, campus. Sorry, College Station.

11 MR. EVANS: And I would still insist on the  
12 foundation that there's no tabulation. He's going on loose  
13 conversation which is speculation. It's not even good  
14 opinion testimony. It's mainly speculation based on  
15 talking to people. There's no tabulation, no indication  
16 that he has made any study to find out what proportion,  
17 what percentage, of colleges use one system and one that  
18 uses another. From his own language saying "most", it  
19 implies that it is not uniform.

20 CHAIRMAN BECHHOEFER: We will deny the  
21 exception or motion, but we will -- I think the record is  
22 clear as to what is opinion and what's -- what's knowledge  
23 and what's opinion and, of course, in evaluating the weight  
24 we give, that will all be taken into account. So, I think  
25 the record now has been clarified as to what is direct

1 knowledge.

2 You can proceed.

3 BY MS. CARROLL:

4 Q Did you ever participate in any meetings like  
5 was held in this past week in Georgia, which was I believe  
6 called the Southeastern College Radiation Safety Officers  
7 Association or annual meeting?

8 A I've participated in numerous health physics  
9 society meetings, nationally and local chapters, Virginia,  
10 California. I don't think I've participated in that  
11 particular group's meeting.

12 Q Do these meetings exist to facilitate the  
13 sharing of experience and knowledge within this profession?

14 A Yes.

15 Q Thank you. Just a couple of ideas that came up  
16 from the objections as such. Were you very aware of the  
17 difference in Georgia Tech's management structure from the  
18 University of Virginia's when you made that transition?

19 A I was somewhat aware of it. I knew that the --  
20 for example, the manager of radiation safety office -- the  
21 Manager, Office of Radiation Safety was not also their RSO,  
22 radiation safety officer. Those were two separate  
23 positions.

24 Q When you got some experience with Georgia Tech  
25 did you perceive the difference in structure?

1           A       Yes, after I was there some time I had a much  
2 stronger feeling for the problems with the structure.

3           Q       May I ask you to elaborate on that, please?

4           A       Well, I realized that the health physics  
5 personnel, for example the technicians were not -- were  
6 doing things for other people that were not independent of  
7 the operations staff. They were -- and that I myself had  
8 to -- to move at the approval of the reactor director.

9           Q       Was this unusual in your experience?

10          A       In my experience in Virginia, the reactor  
11 director was part of the process of implementing change,  
12 but if severe problems arose or conflicts arose, they could  
13 usually be resolved in the reactor safety committee which  
14 was a committee overseeing the reactor operations, which  
15 included as members myself as the radiation safety officer  
16 and the reactor director and the director of nuclear  
17 engineering.

18          Q       I suppose the MORS at Tech, you were involved  
19 in their nuclear safeguards committee?

20          A       Yes. The MORS was an ex-officio non-voting  
21 member, as I recall.

22          Q       So you could raise your appeal and influence the  
23 decision as much as you could but couldn't directly vote  
24 on --

25          A       Correct.

1           Q       -- what was decision would be accepted? Did  
2       that -- Can you compare that committee structure to the  
3       University of Virginia? Is there any contrast? Are they  
4       identical or are there differences you could highlight?

5           A       They were both composed mainly of faculty  
6       members in the engineering and physical sciences, mostly  
7       nuclear engineering, I supposed. I don't think  
8       structurally they were very much different.

9           Q       The University of Virginia had one committee?

10          A       They had a reactor safety committee and then  
11       they had a radiation safety committee, which was to oversee  
12       the rest of the campus.

13          Q       Now, you said that Dr. Revsin was not radiation  
14       safety officer when you first took the manager of Office of  
15       Radiation Safety position?

16          A       I'm not sure if she held that position or not.  
17       She may have. I know that I did not hold the radiation  
18       safety officer title per se. I was officer -- or manager  
19       of Office of Radiation Safety.

20          Q       Did Georgia Tech have an RSO to the best of  
21       your memory?

22          A       Yes, they must have. I think every facility  
23       has to name one on the license. It was probably Dr.  
24       Revsin.

25          Q       Dr. Revsin then was around. You just don't



1 remember exactly what her title was?

2 A Oh, she was -- Yes, she was working there when  
3 I was there. I don't -- I seem to recall that she probably  
4 held that title.

5 MS. CARROLL: Well, I think I'm ready to get  
6 some more paper flowing. There's a -- Let me see what I  
7 want to do here before we start jumping around the room.  
8 Let's just take the Revsin --

9 CHAIRMAN BECHHOEFER: Off the record for one  
10 second.

11 (Off the record discussion.)

12 CHAIRMAN BECHHOEFER: Back on the record.

13 MS. CARROLL: I believe we are up to number 10.

14 (The document referred to was marked  
15 for identification as GANE Exhibit  
16 No. 10.)

17 MS. CARROLL: I hope you ate a good lunch  
18 because you will be jumping around a lot.

19 MR. JOHNSON: I need the exercise.

20 MS. CARROLL: This will be number 10. Do you  
21 have a copy of this, Dr. Copcutt?

22 THE WITNESS: I don't know what it is.

23 MS. CARROLL: It is a memo from Dr. Revsin  
24 dated September 28th.

25 THE WITNESS: Yes.

1 MS. CARROLL: This is number 10.

2

3 THE REPORTER: What's this stack up here? Is  
4 this yours?

5 MS. CARROLL: This is mine.

6 THE REPORTER: Oh, okay. Let's keep it  
7 separate.

8 MS. CARROLL: I just have a logistical problem  
9 with my perch here. I'll try and pen it a little  
10 better.

11 BY MS. CARROLL:

12 Q GANE found a memo dated September 28th from Dr.  
13 Revsin, and when I asked you about it one time in a phone  
14 conversation, Dr. Copcutt, you indicated you hadn't been  
15 aware of it.

16 A That's right.

17 Q And I believe you received a copy from us?

18 A That's right.

19 Q Well, this raised a lot of questions in GANE's  
20 mind about your relationship with Dr. Revsin, and I would  
21 like you to comment, as you can, on how she functioned  
22 within the structure there. What was her piece of the  
23 puzzle? What were her responsibilities and how did they  
24 relate to you?

25 A I believe her title was assistant director of

1 the facility. She had been previously -- Well, I think  
2 previously there had not been a different position, manager  
3 of Office of Radiation Safety and radiation safety officer.  
4 I believe she had occupied both those positions as one.  
5 Then when I came I became the manager of Office of  
6 Radiation Safety. I interacted with her quite a bit when I  
7 initially got to the facility, and as I spent some time  
8 there I thought there was some confusion, at least in the  
9 minds of the health physics personnel, as to who was the  
10 person responsible for running the radiation safety office.

11 Q Whether it was Dr. Revsin or yourself?

12 A Right. Yes.

13 Q And that would be the extent of it? How did  
14 her tasks help you perform your function?

15 A Well, there was a transition period in which  
16 she was instructive in the way -- just giving me  
17 information on the nuts and bolts of the system as it  
18 existed, the equipment, that sort of thing. And then she  
19 also had duties, which I am not completely familiar with as  
20 to the operations of the reactor as assistant director and  
21 probably the utilization of the reactor and scientific  
22 experiments with outside people, but I was not involved  
23 with that aspect of the work.

24 Q Weren't you responsible for whether it was  
25 being practiced safely or not?

1           A       Yes, I was responsible for whether or not the  
2 reactor was -- during its operation whether the radiation  
3 safety procedures were being followed and whether the  
4 federal regulations were being followed, the NRC  
5 regulations.

6           Q       This is harder than I thought it was going to  
7 be. This letter is pretty negative and -- Let me back up  
8 here. After you had your verbal exchange with Dr. Karam in  
9 which he asked you not to document -- not to document, did  
10 you change your -- did things change in the office? Did  
11 your tasks change? What happened following that?

12          A       As I recall there was a period -- Let's see, it  
13 was probably some time in August that I began to get the  
14 feeling that I could not -- wouldn't be satisfied in that  
15 position working at that facility under those  
16 circumstances, and it was probably some time in September -  
17 - I guess September 28th that Dr. Revsin wrote this memo to  
18 Dr. Karam, which I didn't see, but I notice that most of  
19 the points in this memo or many of them are referenced in  
20 Dr. Karam's memo to me dated October 5th.

21               MS. CARROLL: Maybe it would be could to  
22 distribute those and there's another little item, just to  
23 keep it in sequence, there's a memo from Copcutt dated  
24 October 4th.

25               MR. JOHNSON: I have the one on October 4th. I

1 need the October 5th.

2 MS. CARROLL: Okay. We have a logistical  
3 problem in that my copy service evidently missed one of our  
4 documents.

5 MR. TURK: Could we go off the record a moment,  
6 Your Honor?

7 CHAIRMAN BECHHOEFER: Yes, we can go off the  
8 record for a minute.

9 (Off the record discussion.)

10 CHAIRMAN BECHHOEFER: Ready to go on the  
11 record?

12 MS. CARROLL: Okay, where are we? We're at  
13 number 11. Is everybody with me? We'll make October 4  
14 number 11, and October 5 number 12 -- which reminds me,  
15 don't let me move to enter, to put this stuff in the  
16 record. I'm sure we can mop up at the very end of all of  
17 this and move to put everything in all at once, which will  
18 make it harder for you track what you are going to object  
19 to. You've got a system.

20 MR. EVANS: I'm not objecting to any of the  
21 documents, I don't think, not to date. I'm going to be re-  
22 introducing them with other numbers.

23 MS. CARROLL: Oh, well, I'll be damned. We'll  
24 see how that feels.

25 (The documents referred to were

1 marked for identification as GANE's  
2 Exhibit No. 11 and 12.)

3 MS. CARROLL: I think the October 4th document  
4 is interesting because Dr. Copcutt appears to be --

5 MR. EVANS: I object to her testifying.

6 MS. CARROLL: I'm not supposed to be  
7 approaching it this way.

8 MR. EVANS: It's not Ben Matlock. You're not  
9 allowed to testify on direct.

10 CHAIRMAN BECHHOEFER: You're going to have to  
11 ask Dr. Copcutt.

12 MS. CARROLL: Where's my script writer?

13 BY MS. CARROLL:

14 Q Dr. Copcutt, this October 4th memo from you  
15 scheduling training, were you in a business as usual mode?  
16 This would be less than a week after Revsin had written  
17 that memo that you didn't know about.

18 A It was, as far as I am concerned, just a  
19 routine memo announcing some training that had to be  
20 performed periodically.

21 Q And that was a routine part of your job?

22 A Right.

23 Q Now, the October 5th memo, as you pointed out,  
24 picked up pretty much on Revsin's memo that you were  
25 unaware of at the time, and how did you become aware of



1 this October 5th memo that we found?

2 A The October 5th memo was given to me by Dr.  
3 Karam. I think it was before -- or during a meeting that  
4 we had probably on that day, a meeting between myself, Dr.  
5 Karam and Dr. Revsin was also there.

6 Q And -- You know, there's a lot of people in  
7 here that I don't know who they are, and they can't see  
8 this paperwork so I think I'm going to bring out with you a  
9 bit -- This is a public hearing. So even though it may be  
10 redundant -- I'm not sure. It's entirely up to you.  
11 Certainly all the parties that are arguing and making the  
12 decisions can read this in their own leisure time, but I  
13 would ask you to indulge me in describing it a little bit  
14 more and include how it struck you and if you thought it  
15 was legitimate -- you know, legitimate criticism or if you  
16 thought they were looking for things their program didn't  
17 need or did or if it just wasn't your cup of tea. I would  
18 ask you to elaborate on what was in here and how it struck  
19 you.

20 A Well, I guess I was somewhat surprised when  
21 this meeting and memo occurred. It struck me right off the  
22 bat as somewhat petty in some of its points, and I have to  
23 say that it's -- at least in my own mind -- I viewed it as  
24 a way for the facility director, or an attempt by the  
25 facility director to maintain control over the actions of

1 the manager of the Office of Radiation Safety. I viewed it  
2 as a -- sort of a punishment letter for acting in a way  
3 that was maybe different than was expected or had been  
4 previously the norm at the facility, and I noted that some  
5 of the things that were listed as problems like page 2, "It  
6 is not in the Center's best interest to only meet  
7 regulatory demands," that -- I had always viewed meeting  
8 regulatory demands as my primary responsibility in that  
9 position. So that struck me as -- Well, it indicated to me  
10 that there was a different priority from that held by  
11 myself at the management level. And I also got the opinion  
12 that what was wanted of me was to spend a lot of time  
13 writing procedures and getting some sort of income research  
14 money coming into the facility by either initiating a  
15 teaching program for outsiders or doing -- initiating some  
16 sort of research funded by an outside entity.

17 And the memo was numerous procedures were in need of  
18 updating in the opinion of Dr. Karam. And one part of the  
19 memo that I strongly objected to was the personal  
20 performance evaluation concerning times that I came and  
21 went from the facility, particularly that, since here in  
22 this memo it sounds like I was coming in at 10:00 in the  
23 morning. As I recall I was coming in at 8:00 and then  
24 maybe one day I came in at 8:05 and another day I came in  
25 at 7:55 and another day I came in at 8:12. You know, it

1     seemed a very petty strange thing, especially at the level  
2     of professional people that I thought I was working with.

3           Q     Did you feel like -- Did you feel that to  
4     perform your job properly you might need a little bit of  
5     freedom of movement to go where you thought that --

6           A     Well, some of that, but I mean the memo  
7     indicates that I was expected to tell the director exactly  
8     where I was pretty much all the time and part of my job was  
9     to do radiation safety procedures on other parts of the  
10    campus, such as the research building incident, and that  
11    would involve going out and doing things maybe in somewhat  
12    of an unstructured manner, but I think the coming and going  
13    -- coming late and going early, that, in my opinion, was  
14    somewhat petty made-up charge, which annoyed me a great  
15    deal.

16          Q     Now, you knew Dr. Revsin when she was in the  
17    position of NRC inspector --

18          A     Yes.

19          Q     -- at the University of Virginia?

20          A     She inspected the Virginia facility at least  
21    once and maybe more times.

22          Q     And one thing that GANE heard in talking to  
23    many, many people in previous employment at Georgia Tech  
24    was that Revsin had a great interest in procedures. Do you  
25    have any comment on that?

1           A       I think I gathered that she -- You know,  
2 different inspectors have their different priorities and I  
3 gathered that one of her high priority items to look at was  
4 procedures when she inspected us.

5           Q       Now, in her memo, which is GANE number 10,  
6 there is a reference -- and it seems, as I recall, it was  
7 reiterated from the performance review, which is number 12,  
8 to production, that you weren't producing. Now, GANE was  
9 pretty impressed with these investigations -- these thick  
10 investigation reports that you put out in a week's time.  
11 So can you please tell us what this production was in your  
12 mind that they were looking for?

13          A       I assume it was more procedure writing and that  
14 general sort of thing. I don't think it was more of those  
15 type of memos.

16          Q       Was Revsin involved in discouraging you to  
17 document?

18          A       She was at this meeting with Dr. Karam, and at  
19 this meeting --

20          Q       The one that's --

21          A       The October 5th, or thereabouts when we talked  
22 about this memo. It was herself and myself and Dr. Karam  
23 and I recall that that came up at this meeting. And I  
24 don't know if she said anything directly -- you know, this  
25 was six years ago -- directly to me about it, but she was

1 at this meeting and I know we discussed it there.

2 Q And again, some time had passed. By the time  
3 of this meeting, you'd been there several times. What was  
4 the rationale given to you to not document four months  
5 later?

6 A Well, I think it came up as a -- I don't think  
7 that was the key point of this meeting. It probably just  
8 came up as a sideline that -- where -- particularly -- It's  
9 not mentioned specifically in this memo, but as I recall we  
10 talked about it verbally, and to be frank, ever since my  
11 initial conversation, or my conversation with Dr. Karam  
12 after some of those memos came out, I was reluctant to do  
13 anymore memos after that and that's why you see a drop-off  
14 in the number of correspondence in myself, following the  
15 beginning of August.

16 Q It would look a little different right now,  
17 don't you think, if Georgia Tech had -- or Dr. Karam had  
18 documented in his --

19 MR. EVANS: Objection, leading question.

20 MR. TURK: And no foundation.

21 CHAIRMAN BECHHOEFER: That's sustained. You'll  
22 have to ask the question differently.

23 MS. CARROLL: Right.

24 Well, I'm in here with a bunch of focused  
25 linear people and I'm sorry, I'm precocious person and

1 that's just how it's going to be. We'll come back to it.  
2 And it'll do y'all good because half the world thinks that  
3 way anyway.

4 Let's see, seems like there was something over  
5 here I wanted.

6 ADMINISTRATIVE JUDGE LAM: I had a question for  
7 Dr. Copcutt. I hear that you had a strong objection to the  
8 time and attendance issue raised in the October 5 memo by  
9 Dr. Karam. Is your objection based on that you consider  
10 coming in late a little bit and leaving a little bit early  
11 or not informing the secretary as petty or is your  
12 objection based on these allegations have no merit?

13 THE WITNESS: The objection is that I viewed it  
14 as a clear signal to me to do my job a certain way or I  
15 would time after time get these sort of allegations made  
16 against me, which were, in my mind, very petty. Again, if  
17 coming in at 8:05 is coming in late, then I was guilty of  
18 coming in at 8:05 a few days.

19 ADMINISTRATIVE JUDGE LAM: So basically what  
20 you're saying is being five minutes late, most rational  
21 people would agree with you that is not late. Anybody that  
22 makes that accusation is being petty, is that your thought  
23 process?

24 THE WITNESS: Yes. And since this was being  
25 brought up in a written form, I realized that this was a



1 way that I was going to be controlled -- what I did in my  
2 job as Manager, Office of Radiation Safety was going to be  
3 strictly controlled or else I would receive numerous more  
4 personal evaluations of this type.

5 ADMINISTRATIVE JUDGE LAM: Thank you.

6 MS. CARROLL: This I know, October 5 was a  
7 Friday. Rob, I'm ready for October 8 and we're up to  
8 number 13.

9 (The document referred to was marked  
10 for identification as GANE Exhibit  
11 Number 13.)

12 BY MS. CARROLL:

13 Q Do you have your resignation letter from  
14 October 8?

15 A Yes.

16 Q Probably the most memorable inclusion in this.

17 MS. CARROLL: This 20 questions is hard, I'll  
18 admit it. But I'm going to indulge myself in making sure  
19 that I pull out the story as I know it. I guess I actually  
20 got something here I didn't know too.

21 BY MS. CARROLL:

22 Q What we have in number 13 -- is this your  
23 letter of resignation, Dr. Copcutt?

24 A I assume it is, I haven't seen your --

25 Q You can use mine, I've memorized it -- but give

1 it back.

2 A I will. Yes, it is.

3 Q So it looks to GANE like you thought about it  
4 over the weekend and you came in and had made up your mind.

5 A Right.

6 Q Let's see. Now what I want them to hear is a  
7 line in here, so I'm going to ask you to read it, how's  
8 that? I ask you to read paragraph 2 into the record,  
9 please.

10 MR. EVANS: Just for the formality, has this  
11 document been introduced? I have no objection to it, but  
12 before he reads it, it should be in evidence.

13 CHAIRMAN BECHHOEFER: Well, 10, 11, 12 and 13  
14 are not in. Have you proposed that this is GANE 13?

15 MS. CARROLL: Why don't we catch up.

16 CHAIRMAN BECHHOEFER: We'll identified it as  
17 13.

18 MS. CARROLL: Where are we, Rob?

19 MR. JOHNSON: 10, 11, 12 and 13, like he said,  
20 we need to --

21 CHAIRMAN BECHHOEFER: They have not been moved  
22 into evidence yet.

23 MS. CARROLL: GANE moves to put 10, 11, 12 and  
24 13 into the record.

25 MR. EVANS: No objection.

1 MR. TURK: None from the staff.

2 CHAIRMAN BECHHOEFER: Okay, 10, 11, 12 and 13  
3 are admitted.

4  
5 (The documents, heretofore marked as  
6 GANE Exhibits Number 10, 11, 12 and  
7 13, were received in evidence.)

8 THE WITNESS: Should I read?

9 MS. CARROLL: Yes, please.

10 THE WITNESS: Second paragraph of that letter  
11 is stating my reasons for leaving: "After careful  
12 consideration, I feel that it is impossible for me to work  
13 effectively within the structure of the radiation safety  
14 program at Georgia Tech. I believe that the Manager,  
15 Office of Radiation Safety lacks sufficient operational  
16 freedom to adequately conduct the radiation safety program.  
17 Specifically, health physics staff appear to be under the  
18 dual control of the MORS and the facility associate  
19 director. On a personal basis, I have been discouraged  
20 from making even minor decisions without first consulting  
21 you and Dr. Revsin. I also object to suggestions from  
22 yourself and Dr. Revsin that I should not in the future  
23 document observed regulatory violations or proposed program  
24 improvements."

25 MS. CARROLL: Thank you.

1 BY MS. CARROLL:

2 Q Does that sum up your feelings? Would you care  
3 to elaborate?

4 A I think the last paragraph sums up my feelings.  
5 "I cannot in good conscience take responsibility for a  
6 program whose priorities I cannot set and which I must  
7 compromise my professional judgments."

8 Q And would you care to add to that at this time?

9 A I think it's pretty self-explanatory.

10 MS. CARROLL: Can I have my exhibit back before  
11 we forget?

12 (A document was proffered to Ms. Carroll.)

13 CHAIRMAN BECHHOEFER: Dr. Copcutt, let me just  
14 ask you to embellish one statement a little bit -- and I  
15 hope I'm not taking away some of your questions, but when  
16 you say "observed regulatory violations," does that mean a  
17 violation of NRC regulations or does that refer to  
18 something else? I'm just trying to clarify what --

19 THE WITNESS: That would be NRC.

20 CHAIRMAN BECHHOEFER: -- you're talking about.

21 THE WITNESS: Yeah, NRC violations or state  
22 violations, depending which material.

23 CHAIRMAN BECHHOEFER: But there were particular  
24 what you believed were violations of NRC requirements  
25 that -- well are they other than the ones that are

1       referenced perhaps in some of these earlier letters?

2               THE WITNESS: No, there were not any  
3       outstanding non-compliance -- observed non-compliances when  
4       I wrote that letter, no.

5               CHAIRMAN BECHHOEFER: Were there any that were  
6       required to be reported to NRC but to your knowledge were  
7       not?

8               THE WITNESS: No.

9               CHAIRMAN BECHHOEFER: Thanks.

10              ADMINISTRATIVE JUDGE LAM: And also, Dr.  
11       Copcutt, let me also go to the same statement that you  
12       make. The last sentence, second paragraph in this letter,  
13       when you stated you also "object to suggestions made from  
14       yourself and Dr. Revsin," it's plural, means more than one  
15       time. Do you have supporting evidence to corroborate this  
16       statement other than what's in here?

17              THE WITNESS: I only have my recollection. All  
18       this was a verbal communication, some at this meeting of  
19       October 5 and some time after the memo where I documented  
20       those three radiation safety violations in the reactor with  
21       Dr. Karam alone. It was verbal conversation, I don't have  
22       any documentation.

23              ADMINISTRATIVE JUDGE LAM: Were there any other  
24       people involved in that meeting?

25              THE WITNESS: No.

1 ADMINISTRATIVE JUDGE LAM: There's no third  
2 body?

3 THE WITNESS: Just myself -- in the October 5th  
4 meeting myself, Dr. Revsin and Dr. Karam. In the meeting  
5 or the sort of informal hallway conversation previously,  
6 myself and Dr. Karam.

7 ADMINISTRATIVE JUDGE LAM: Is there a diary  
8 that you keep?

9 THE WITNESS: No, I do not.

10 ADMINISTRATIVE JUDGE LAM: Is there a memo that  
11 you write to file?

12 THE WITNESS: Excuse me?

13 ADMINISTRATIVE JUDGE LAM: I see a memo to file  
14 from Dr. Karam here talking about issues and things. Had  
15 you considered writing a memo to file documenting that  
16 particular conversation where a suggestion was made to you  
17 not to document any violations?

18 THE WITNESS: No, I hadn't considered that.

19 ADMINISTRATIVE JUDGE LAM: Oh, I didn't mean to  
20 put that as a burden to you, I'm just probing if you have  
21 any collaborating evidence.

22 THE WITNESS: No, I hadn't really thought of  
23 that option.

24 ADMINISTRATIVE JUDGE LAM: Thank you.

25 ADMINISTRATIVE JUDGE KLINE: Dr. Copcutt, did



1 you have a staff of health physicists reporting to you  
2 during your tenure at Georgia Tech?

3 THE WITNESS: Yes -- well, health physics  
4 technicians.

5 ADMINISTRATIVE JUDGE KLINE: Yeah, that was my  
6 follow-up question. In your mind, were they qualified in  
7 the field of health physics to hold the positions that they  
8 did?

9 THE WITNESS: They were qualified as health  
10 physics technicians. I wouldn't say that the personnel  
11 were qualified as health physicists, independent health  
12 physicists, at the time I was there, although some may have  
13 gone on to get future training.

14 ADMINISTRATIVE JUDGE KLINE: Did you feel that  
15 the tasks outlined in Dr. Karam's letter could not in any  
16 way be delegated to your staff to accomplish in the form of  
17 rules writing or procedure writing?

18 THE WITNESS: Not the procedure writing, I'm  
19 sure that wouldn't be delegatable.

20 ADMINISTRATIVE JUDGE KLINE: Did you hold  
21 academic rank in the university as well as Manager of  
22 Radiation Safety?

23 THE WITNESS: Yes -- well, it was a research  
24 rank, senior research scientist.

25 ADMINISTRATIVE JUDGE KLINE: Senior research

1     scientist. Is that in the Department of Engineering?

2             THE WITNESS: I think it was the GFIR.

3             CHAIRMAN BECHHOEFER: What's that stand for?

4             THE WITNESS: I wish I could recall.

5             MS. CARROLL: GTRI?

6             THE WITNESS: GTRI, Georgia Tech Research  
7     Institute. It's not a real department, it's in a sense a  
8     research entity of the university.

9             ADMINISTRATIVE JUDGE KLINE: As a member of  
10    that department, were you expected to conduct teaching and  
11    research as well as your activities at the reactor, as  
12    Manager of Radiation Safety?

13            THE WITNESS: Actually when I came, my  
14    expectation was to be involved in research in the  
15    biomedical field using the reactor for boron capture  
16    neutron therapy. So I did anticipate that was part of my  
17    job. Teaching, I didn't anticipate that teaching was a  
18    part of the job except teaching radiation safety to the  
19    staff.

20            ADMINISTRATIVE JUDGE KLINE: Okay, thank you.

21    BY MS. CARROLL:

22            Q     That question about boron neutron capture  
23    therapy, what is your -- can you remember -- it has been  
24    six years, I know, but can you remember, and if you can,  
25    articulate for us what you think Georgia Tech would need to

1 do to be able to do that?

2 MR. TURK: Objection, Your Honor, unless  
3 there's some showing of foundation, first of all, the  
4 extent to which the witness is aware of the current status  
5 of the university's boron neutron capture therapy program.  
6 I have no objection if he wants to comment on what he saw  
7 while he was there, but I think we need a foundation.

8 MS. CARROLL: Well, that's what I was asking  
9 for.

10 MR. TURK: We need a foundation for anything  
11 after that period.

12 BY MS. CARROLL:

13 Q I wanted to know what you thought the stated  
14 program was in 1990.

15 A yeah, I was -- as I said, part of my coming to  
16 Georgia Tech was my interest in doing research in boron  
17 capture neutron therapy because I have great interest, and  
18 now my major interest is in medical physics. They're one  
19 of the few reactors that has the reactor itself big enough  
20 to do this sort of work. After I got there, I realized  
21 that there was very little or no funding for this research  
22 to be done and that it would require a great deal of  
23 physical improvement in the biomedical research facility  
24 where this procedure would probably be done. It would  
25 require an affiliation with some sort of medical school or

1 hospital. That procedure is very elaborate and very highly  
2 technical. And in my opinion, it would be something, even  
3 if it was well-funded, it would occur only well down the  
4 road in time, at least at the time that I was there in  
5 1990.

6 Q Now you said something about the amount of  
7 power that is required for this. How much power is  
8 required?

9 A Well, Georgia Tech has a five megawatt research  
10 reactor and higher power is better for neutron -- boron  
11 neutron capture therapy. Theoretically it was potential to  
12 do it.

13 Q In your time there, could you describe how  
14 frequently and what power levels the reactor operated, that  
15 you would have been a first witness to how it operated, how  
16 it performed?

17 A Well, I observed the operations many times,  
18 just being in the containment area, supervising, observing  
19 the radiation safety procedures. From my point of view, I  
20 personally didn't get involved in the details of what power  
21 it was operating at or very much of the details of what  
22 they were doing. I just wanted to know what was going into  
23 the reactor, what were the potential contamination  
24 problems, the potential radiation exposure problems, that  
25 sort of thing.

1           Q       But in your experience, do you feel that it  
2       could have successfully performed boron capture neutron  
3       therapy -- is that the correct term -- the boron capture  
4       neutron therapy, would it require five megawatts?

5           A       Well, it would be one of the reactors that  
6       could do that, yes. I don't know if -- I couldn't say  
7       exactly what megawatts it requires.

8           Q       But more than one.

9           A       Right.

10          Q       I know what I want to hear you say on the stand  
11       and it may come out in a crazy sequence, but maybe we can  
12       get it out.

13                   There's some more paper I think I'd like to  
14       distribute, I only have three more pieces, so let's just  
15       get it out there and discuss it and keep wandering through  
16       the questions for awhile.

17                   And that would be probably everything we've got  
18       left -- that and this and this. What's the sequence? To  
19       get the paper in everybody's hands and then identify the  
20       document and then talk about them and enter them in the  
21       record?

22                   (Document documents were distributed.)

23          Q       And Dr. Copcutt, what we're talking about,  
24       let's just get you a copy of this -- you did read this, I  
25       believe. These I mailed to you and they would have been

1 after you resigned but before you left, I believe.

2 A Yes.

3 MS. CARROLL: I'd like to mark the memo to the  
4 Nuclear Safeguards Committee from Karam as number 14, GANE  
5 Number 14.

6 (The document referred to was marked  
7 for identification as GANE Exhibit  
8 Number 14.)

9 CHAIRMAN BECHHOEFER: Have you identified all  
10 these documents?

11 MS. CARROLL: No, I haven't. The witness is  
12 reading my copy of one and it was probably not copied to  
13 him, so I think it's important that he get to do that.

14 We'll make the May 6 letter to Glenn Carroll  
15 from Robert Mulder at UVA Number 16. You should have  
16 copies of these.

17 THE WITNESS. I don't think so.

18 MS. CARROLL: I think I may be able to --

19 THE REPORTER: What is 15?

20 MS. CARROLL: Number 15 is the memo, October 18  
21 memo from Dr. Karam to Dr. Revsin.

22 (The documents referred to were  
23 marked for identification as GANE  
24 Exhibits Number 15 and 16.)

25 BY MS. CARROLL:



1           Q     Dr. Copcutt, have you had time to read the  
2     October 10th memo which was to the Nuclear Safeguards  
3     Committee from Dr. Karam?

4           A     Yes.

5           Q     And do you feel that it paints the same picture  
6     you would paint about your time there and the effort to  
7     work things out satisfactorily, keeping the public safety  
8     in mind? What I'm fishing for is how would you present the  
9     outcome of your time there, your interaction with them on  
10    safety issues, your performance review in contrast to this  
11    letter?

12          A     Obviously, I have a different opinion of the  
13    events. This memo was after my resignation letter but  
14    before I had left the facility, so it's informing the  
15    Safeguards Committee of my resignation.

16          Q     In paragraph 2, it says that the intent of the  
17    memo I believe that was given to you, which resulted in  
18    your letter of resignation -- do you feel it referred that  
19    your tasks were clear to you at the time you were MORS?

20          A     No, I was somewhat confused as to what the job  
21    really was. I thought at first when I arrived I knew what  
22    it was, but having done things a certain way and was in  
23    essence told to do things a different way, I wasn't sure  
24    that there was any way that that job could be done under  
25    those conditions, that would have been satisfactory.

1           Q       If -- you had indicated to me that following  
2 the sequence that looked like it was about a week's worth  
3 of time and you had produced three clear tasks and it would  
4 appear you had replaced the filters, you had identified  
5 radiation areas and what could be done about it in the  
6 containment of the reactor, and you had dealt with the lab  
7 and the personnel that had been exposed. And then after  
8 that, there was no documentation in the file of what you  
9 did -- I'm trying to finish this process, I kind of keep  
10 loading up. Was there backup if you weren't performing  
11 these type of investigations, were there other personnel  
12 that were performing these types of tasks?

13           A       No. I mean, there were a number of routine  
14 surveys that were carried out on a daily or whatever  
15 schedule. Those were written into procedures and many of  
16 them performed by technologists or the health physics staff  
17 and some operations staff. Those were always being done,  
18 sort of automatically as part of the facility operating. I  
19 think some of the -- if you're trying to account for why  
20 the memos stopped coming was because I was told not to do  
21 it that way. And I think there was some point in there  
22 probably after that initial period where I realized that  
23 that position wasn't going to work for me, I wasn't going  
24 to be able to function in it, and so at some point, I was  
25 trying to sort of cut my losses and get out.

1 Q Did you do that same type of work, but you  
2 didn't make the documentation of it?

3 A Well, some of these things, like the Cherry  
4 Emerson Building incident just happened at a certain time  
5 and you responded. And the map detector just happened at a  
6 certain time. Other things such as the survey that I did  
7 in the containment area was just something I did when I  
8 initially came, shortly after I initially came because I  
9 thought it was good to go around the facility, get an idea  
10 of the radiation levels and do my own personal surveys of  
11 the area.

12 Q As part of getting acquainted and knowing where  
13 you were and what the situation was.

14 A Yes. I don't recall my perception that I was  
15 ignoring and problems that were popping up. It was a  
16 summertime period, there was not much going on. These  
17 things just happened in non-scheduled order.

18 Q They just happened that way. We talked a  
19 little bit about GANE Number 15 -- no, we've talked about  
20 GANE 14.

21 It's not in the record but we've talked about  
22 GANE Number 14.

23 Now, GANE Number 15, Dr. Copcutt --

24 CHAIRMAN BECHHOEFER: I have one clarifying  
25 question on 14. Is the confidential memo to file that's

1 referenced at the bottom of the first paragraph the same as  
2 is now in the record as GANE Exhibit 12, just to connect up  
3 documents, to be sure we know.

4 MR. TURK: That being the October 5, 1990 memo?

5 CHAIRMAN BECHHOEFER: Yes, yes. I just want to

6 --

7 MS. CARROLL: That is the same as GANE Number  
8 12, I believe.

9 CHAIRMAN BECHHOEFER: Right. Dr. Copcutt, are  
10 they the same?

11 THE WITNESS: Yes.

12 CHAIRMAN BECHHOEFER: This is just for record  
13 clarification purposes.

14 BY MS. CARROLL:

15 Q Now, Dr. Copcutt, you probably never saw this  
16 letter from Dr. Revsin to Dr. Karam dated October 18 until  
17 GANE found it through discovery and shared it with you.

18 A That's right, yes.

19 Q And I myself would like to refresh my memory on  
20 it. (Pause.)

21 A About which memo?

22 Q This is the October 18th memo from Dr. Revsin  
23 to Dr. Karam, which the subject is your resignation.

24 A Yes, that's correct, I didn't see it at the  
25 time I was there, I saw it later.

1 Q You were still there though, were you not?

2 A I was still there through I think --

3 Q November 2.

4 A -- November 2.

5 Q Okay, now in paragraph 2, she seems to imply  
6 that you -- let's see now -- we've -- you've already  
7 answered that you were aware of the cadmium spill and the  
8 attention from the regulators on that, but paragraph 2  
9 seems to go to that, to speak to that. Do you --

10 MR. TURK: Is there a question?

11 MS. CARROLL: I'm trying to get one.

12 BY MS. CARROLL:

13 Q What do you think of Dr. Revsin's way of  
14 putting in paragraph 2, using words like "allegation and  
15 innuendo guaranteed to raise questions and concerns in the  
16 minds of the Georgia Tech administration and the federal  
17 and state regulators." What do you have to say to that?

18 A Well, obviously she didn't like the content of  
19 my resignation letter and -- I mean, to be honest, when I  
20 resigned, I wasn't trying to get even with anybody, I was  
21 trying to go on with my career. I had moved from Virginia  
22 to Atlanta, made the entire move and wasn't -- so this  
23 wasn't something I was doing lightly, to move out again in  
24 five months or whatever time. I didn't at that time have  
25 another contract or another job lined up, I had some

1 possibilities, but -- so I was sort of going off into the  
2 wild blue yonder. And again, my objective with this  
3 resignation memo was not to get even with anybody or make a  
4 lot of waves but I was hoping that possibly Georgia Tech  
5 would look at this -- that this would cause somebody in  
6 Georgia Tech, particularly Dr. Poehlein, who I think was  
7 the dean or the vice president over the reactor, to look at  
8 the structure and maybe make some changes in the future,  
9 because I could see people coming in one after another  
10 after I had left and running up against the same problems,  
11 and I hated to see that, professionally-speaking.

12 Q Were you aware of the history previous to you?  
13 Did you have any historical context for who had held the  
14 position or radiation safety officer or manager of office  
15 of radiation safety and whether they'd stayed a long time  
16 or short time or --

17 A I knew Bob Boyd had been there for a long time  
18 as RSO, I knew about the cadmium incident in '88, I knew  
19 that apparently he had been fired because of that or had  
20 left because of that. So I knew that there was a long  
21 period of the same staff being there before 1988 and then  
22 there -- that suddenly ended with that incident.

23 Q Did you know that there had been a structural  
24 change in management at any time prior to your coming on  
25 board?



1           A       I knew that just as I was coming, there were  
2       some changes being made concerning the RSO position being  
3       separated from the MORS, manager, office of radiation  
4       safety position. And then I found later that there were  
5       some changes made in '88 or right before the cadmium  
6       incident I believe, that -- where the structure of the  
7       radiation safety office was changed, but I'm not familiar  
8       in detail with those.

9           Q       Did you have many interactions with the Nuclear  
10      Safeguards Committee?

11          A       I attended probably three meetings.

12          Q       Did you feel they contributed -- can you  
13      describe how they contributed to the process of radiation  
14      safety?

15          A       Just my observation was that they weren't as  
16      actively involved as the committee that I was used to  
17      working with at the University of Virginia. That's just my  
18      observation.

19          Q       Do you think they were able to witness enough  
20      of the day-to-day operations to bring a different  
21      perspective or more did you carry decisions that you needed  
22      to be made to them and present to them? Or beyond that?  
23      I'm trying to give you a couple of ways I could see it  
24      could be looked at.

25          A       I'm sure they all had the technical expertise

1 to function on the committee. I don't think -- again, I  
2 just had the general idea that they weren't taking as  
3 active an interest as I had observed at Virginia, that's  
4 about as far as I guess I can go.

5 Q To you are the terms -- I mean GANE's been  
6 pretty confused about this -- I thought the MORS and RSO  
7 were the same terms for a long time. Are they?

8 A No, they're not. The RSO is someone named on a  
9 license. The RSO, radiation safety officer, is sort of a  
10 universal title used throughout many institutions for the  
11 person that's named on the license or licenses to be in  
12 charge of -- responsible for radiation safety.

13 Q Does it surprise you if an institution has an  
14 RSO and an MORS?

15 A Usually they're one and the same.

16 Q So there's no separation of tasks particularly,  
17 what you had described at the University of Virginia, that  
18 the -- one committee was over the reactor and the other  
19 committee was over all the other radiation related  
20 programs.

21 A What was the question?

22 Q Well, so an RSO wouldn't necessarily be linked  
23 to the reactor and MORS would be linked to the campus-wide  
24 program or any distinction like that?

25 A Well, I've had a lot of experience and

1 interaction with other campus radiation safety programs,  
2 not ones that necessarily have reactors, and I can say the  
3 majority of those, the RSO is the person that's running the  
4 radiation safety office and supervising the personnel that  
5 do the radiation safety duties on the campus.

6 Q Did you feel hampered by there not being an RSO  
7 during your time there?

8 A Well, I think it's just basically a title.

9 Q So did you feel that you functioned as RSO  
10 while your title was MORS?

11 A I felt that that's what I was being hired to  
12 function as, yes.

13 Q And did you presume that that filled the  
14 regulatory requirement, that it was being met by your being  
15 MORS?

16 A Yes.

17 MS. CARROLL: If you're wondering where this  
18 line of questioning is going, you can just keep wondering.

19 MR. TURK: I'm struggling with an objection  
20 because it hasn't been made clear which regulatory  
21 requirements the doctor may be speaking about. If he could  
22 clarify that, I'll be very happy. To be more precise, are  
23 you speaking about state or federal regulatory  
24 requirements?

25 CHAIRMAN BECHHOEFER: Could you elaborate?

1 BY MS. CARROLL:

2 Q Could you qualify this reference you made to a  
3 regulatory requirement for RSO?

4 A Well, in Georgia, they have a state regulatory  
5 agency that regulates the radioactive materials on the  
6 campus. And as it happened, in Virginia, the NRC directly  
7 regulated both the reactor license and the radioactive  
8 materials. So it's different in different institutions.

9 Q It would be in probably the safety analysis  
10 report that the regulator and the licensee had agreed upon  
11 and the Tech Specs. Would it be in the Tech Specs?

12 A I know when you apply for radioactive materials  
13 license with so far as I know any state agency and the NRC  
14 for a radioactive materials license, they want a radiation  
15 safety officer named on that license, as far as I'm aware.

16 Q Well, this is just new to me. If you don't  
17 mind my asking, did it occur to you -- I mean, you were  
18 MORS, did you feel like it was covered and the technicality  
19 would be understood by anybody questioning it?

20 A It really wasn't a big concern of mine.

21 Q Okay, well I guess I'll just delve into this  
22 elsewhere.

23 Now just to finish with my paper, because I  
24 would just like to be done with my paper and then we're  
25 going to go round and round and round until I get all the

1 truths that I'm aware of out.

2 Wait, no, I think I have another question on  
3 Number 15, so you can just old Number 16 aside.

4 Let's see, I've got this memo in here, I don't  
5 have to have Dr. Copcutt's comments on it, I mean we can  
6 all use these records for other content that Dr. Copcutt  
7 may or may not speak about in his testimony.

8 CHAIRMAN BECHHOEFER: Of course.

9 MS. CARROLL: Okay. I don't think any of  
10 courses any more, sometimes this runs with common sense and  
11 sometimes this process does not run with common sense.

12 Okay, I'm going to cut to GANE Number 16 and  
13 then I believe we will have referred to every single piece  
14 of paper in our possession. Then we'll move to put them in  
15 the record and keep working on it.

16 BY MS. CARROLL:

17 Q Dr. Copcutt, I just want to deal with my paper  
18 and then I'm going to get to some other ideas that are  
19 floating around. GANE Number 16 doesn't involve you, Dr.  
20 Copcutt, this is between us. I asked about the state of  
21 the program at the University of Virginia and received this  
22 glowing letter from Dr. Mulder acknowledging that Dr.  
23 Copcutt's contribution was quite professional and met their  
24 needs during his -- I think it was seven years you were at  
25 the University of Virginia -- eight?

1           A       Seven -- six.

2           Q       That he was highly regarded and acknowledging  
3       that although they could not find any written record of the  
4       NRC's praise for the program at the University of Virginia,  
5       that he did indeed remember receiving praise from the NRC  
6       for how well run that program was. And so I have copied  
7       all of you on this letter. Since there's some hearsay  
8       going back and forth -- Dr. Revsin said this, Dr. Copcutt  
9       says this, Dr. Karam says this, I think we might as well  
10      get Dr. Mulder's comments in the mix.

11           MS. CARROLL: So where are we in movement into  
12      the record?

13           MR. JOHNSON: We need 14, 15 and 16.

14           MS. CARROLL: I'd like to move to enter --

15           ADMINISTRATIVE JUDGE KLINE: Ms. Carroll, on  
16      number 16, why are you offering that particular exhibit  
17      since it doesn't seem to bear on the management of the  
18      Georgia Tech reactor?

19           MS. CARROLL: It bears on the credibility of  
20      our witness.

21           ADMINISTRATIVE JUDGE KLINE: Oh, I see.

22           CHAIRMAN BECHHOEFER: Okay, you can proceed.

23           MS. CARROLL: I think I was moving to enter  
24      GANE 14, 15 and 16 into the record.

25           CHAIRMAN BECHHOEFER: Any objection.



1 MR. EVANS: No objection.

2 MR. TURK: I don't object to 14 or 15, Your  
3 Honor, I have a limited objection to 16 and my objection is  
4 I do not object to the letter being admitted to reflect the  
5 NRC's general praise for the program as it was run by Dr.  
6 Copcutt while he was at UVA. However, to the extent that  
7 this letter might be seen as reflecting the inspection  
8 history and violations that were detected, it does not, and  
9 I would object to it being entered for all purposes. I  
10 have no objection to it being admitted simply for the  
11 purpose of showing NRC's general regard for the program  
12 under Dr. Copcutt.

13 MS. CARROLL: And while we're at it, can we  
14 have the University of Virginia's general regard for Dr.  
15 Copcutt? Because I agree that the reference to  
16 inspections, you'll see I didn't copy them.

17 MR. TURK: I would ask if you have them.

18 MS. CARROLL: I do. They just struck me as  
19 generic. I mean Georgia Tech can produce many similar --

20 MR. TURK: Your Honor, I would not call the UVA  
21 inspection history generic or routine.

22 MS. CARROLL: The documents they showed me.

23 MR. TURK: As I said, I do not object for the  
24 limited purpose of showing the praise and the general  
25 regard, but if we're going to start speaking about

1 inspections, there are things that Ms. Carroll probably has  
2 in her possession that are irrelevant that you're not being  
3 shown.

4 MS. CARROLL: They all no violations or  
5 deviations are noted. Most licensees must have some.

6 CHAIRMAN BECHHOEFER: We will admit GANE  
7 Exhibits 14, 15 and 16, and 16 with the one qualification  
8 raised by Mr. Turk. We will not use this to characterize  
9 NRC inspections, but for other purposes for the description  
10 of Virginia's program, et cetera, we will admit that, for  
11 both purposes.

12  
13 (The documents, heretofore marked as  
14 GANE Exhibits Number 14, 15 and 16,  
15 were received in evidence.)

16 MS. CARROLL: I have a process question. I  
17 heard somebody talk about redirect after cross examination,  
18 but I'm not making any assumptions if this is an option if  
19 I were to release my seat.

20 CHAIRMAN BECHHOEFER: That's correct.

21 MS. CARROLL: I can have it back when everybody  
22 else is finished with Dr. Copcutt?

23 ADMINISTRATIVE JUDGE KLINE: For new stuff.

24 MS. CARROLL: Pardon me?

25 ADMINISTRATIVE JUDGE KLINE: Yes, for something

1 new raised on cross examination. You can't go over ground  
2 that's --

3 MS. CARROLL: Okay, so I have got to exhaust my  
4 --

5 ADMINISTRATIVE JUDGE KLINE: You have to go  
6 over all the ground you intend to go over now and then if  
7 something new comes up, you can do it.

8 MS. CARROLL: That qualification is very  
9 important. If I forget something, the boat's gone.

10 GANE read a lot in our discovery and one of the  
11 things we read were Safeguard Committee minutes and in  
12 February of 1990 -- and gee, I wasn't prepared to put this  
13 in right now -- is that going to be a problem?

14 CHAIRMAN BECHHOEFER: Pardon?

15 MS. CARROLL: I'm going to refer to some  
16 minutes, some Safeguards Committee minutes and I don't have  
17 them prepared to be distributed right now. Is that  
18 something that can be remedied later? All I'm going to  
19 refer to is an item that everybody does have, so that  
20 everybody can at least get that far with this.

21 MR. TURK: Can we go off the record for a  
22 minute?

23 (Brief pause.)

24 CHAIRMAN BECHHOEFER: Back on the record.

25 MS. CARROLL: In the Nuclear Safeguard

1 Committee minutes of 2/15/90, under item number 5, a fellow  
2 named Les Pepperett -- or Petterreck, it's spelled  
3 Pepperett, I think -- asked the committee to look into the  
4 availability of resources to handle removal of radioactive  
5 material from campus, expressed concern -- I believe this  
6 was a direct quote, although it wasn't the whole committee  
7 minutes, and I believe he has a copy, this is on page 7 at  
8 the bottom.

9 MR. EVANS: I think I have to object if he's  
10 being asked questions about minutes of February 1990 when  
11 he didn't get to Georgia Tech until 1 July. I'm not sure  
12 that that's relevant questioning on minutes of a meeting he  
13 didn't attend, unless it's something that he's reading and  
14 interpreting something.

15 MS. CARROLL: I think you need to bear with me  
16 a little bit, because it goes to something I anticipate his  
17 performing once he comes on board.

18 CHAIRMAN BECHHOEFER: You might have to ask Dr.  
19 Karam or somebody like that, or somebody who attended the  
20 meeting.

21 MS. CARROLL: Okay, then let me put it this  
22 way.

23 BY MS. CARROLL:

24 Q There was an indication in Safeguard Committee  
25 minutes prior to your coming on board at Georgia Tech, that

1     there was a nuclear waste problem. I don't know how big of  
2     a problem it was, I don't think the indication was it was  
3     getting into the environment particularly, but the storage  
4     facility was questionable and how much do we have to have  
5     on campus and gee, can't we get rid of some of it and this  
6     was over the course of a few meetings.

7                 MR. TURK: I would object to the  
8     characterization, Your Honor, it's not a document that Dr.  
9     Copcutt is familiar with, he wasn't present. If there's a  
10    simple straight-forward question do you know something, I  
11    have no objection to that question, but not to the way it's  
12    improperly being done now.

13                BY MS. CARROLL:

14                Q     Okay. Well, let me put it this way, GANE has  
15    received the impression from reading the Safeguard  
16    Committee minutes that it was hoped that when your position  
17    was filled, and it just happened that it was you that  
18    filled it, that the nuclear waste would be dealt with.

19                CHAIRMAN BECHHOEFER: You'd better ask him --  
20    is that a question? What's the question?

21                MR. TURK: How about a question -- well --

22                       (Laughter.)

23                MS. CARROLL: This is how public citizens do it  
24    and this is our process and I'm sorry, especially if the  
25    witness gets weary from it.

1 MR. TURK: I have no objection if the question  
2 is was the issue of radioactive waste discussed with the  
3 university before you were hired, or something along that  
4 line.

5 MR. EVANS: I also would have no objection to a  
6 question of that sort, but I do object to a question about  
7 something in the minutes before he was there at a meeting  
8 he didn't attend.

9 CHAIRMAN BECHHOEFER: As I say, you can save  
10 that for Dr. Karam or some other witness perhaps.

11 MS. CARROLL: If you're all finished, may I ask  
12 my question?

13 CHAIRMAN BECHHOEFER: And Dr. Karam, if you  
14 don't know, you can say that too.

15 DR. KARAM: Are you addressing the question to  
16 me?

17 CHAIRMAN BECHHOEFER: No, that was just an  
18 aside. But I'm saying it may be a proper question for Dr.  
19 Karam, it isn't for Dr. Copcutt.

20 BY MS. CARROLL:

21 Q Dr. Copcutt, was nuclear waste understood by  
22 you to be part of your -- did Georgia Tech ask you to do  
23 anything with their nuclear waste?

24 A I understood it that handling of nuclear waste  
25 was part of the -- came under the purview of the Office of



1     Radiation Safety, yes. It's typical. I'm not familiar  
2     with this particular meeting or what waste they were  
3     talking about, but every facility generates some sort of  
4     radioactive waste that has to be disposed of in some  
5     fashion and that was part of the function of the Office of  
6     Radiation Safety.

7           Q       Is that something that came up during your five  
8     months there, did you do anything related to that?

9           A       We -- the topic came up, I can't recall any  
10    specific -- if we made any specific waste shipments to  
11    vendors while I was there or not. I've done that again in  
12    Virginia many times. Other types of waste disposal can be  
13    used, you can just decay the waste if it's a short half-  
14    life. The waste disposal and handling was an ongoing  
15    program there.

16          Q       Do you remember the storage facility at Georgia  
17    Tech?

18          A       Not -- which storage facility?

19          Q       It's what we call a Butler building, it's a  
20    prefab like a toolshed type building that was -- that is in  
21    the corner of the lot and the fence that encloses the  
22    reactor facility.

23          A       Oh.

24          Q       And there's a building that's off in the corner  
25    near Atlantic Drive and near -- I'm not sure what that

1 building is.

2 A I recall that there was a small storage  
3 building there and I think some waste was stored in that  
4 area.

5 Q Did you feel the program for handling the waste  
6 was adequate?

7 A I don't have any specific recollections about  
8 that. There was some waste that -- there's always waste  
9 that has to be shipped and it's just a matter of doing it  
10 at an appropriate time and getting the money to do it. I  
11 really can't recall any great concerns I had over the waste  
12 facility.

13 Q And it wasn't a prominent part of the workload  
14 during your time?

15 A Well, it was part of the program, but it wasn't  
16 something that stands out in my mind as a big overwhelming  
17 problem, it was just part -- keeping up with the  
18 radioactive waste and its disposal in some way is just a  
19 day-to-day thing in radiation safety.

20 Q So nothing dramatic happened when you were  
21 there?

22 A No.

23 Q Now at the July 19 meeting, the Nuclear  
24 Safeguards Committee minutes said they changed the  
25 committee structure that the RSO no longer served as chair.

1 Did that affect you?

2 A Well, I wasn't RSO, so it didn't affect me  
3 directly. That I recall -- yes, I think that was my first  
4 committee meeting there while I was at Tech.

5 Q Item number 5 was of special interest to us and  
6 this is on page 9, I see it's highlighted in yellow on your  
7 copy, but how did you feel about the Director of the Neely  
8 Nuclear Research facility assuring Nuclear Safeguards  
9 Committee members that they are not liable for decisions or  
10 recommendations they make that are rendered based on  
11 information given to them by Neely Research Center  
12 personnel?

13 A Well, it was my first meeting, first attendance  
14 at the Safeguards Committee at Tech, so -- and I was aware  
15 of the history there and the previous incident, the cadmium  
16 incident, so I didn't think it was strange that the  
17 committee members might have some concern about personal  
18 liability. I guess they were just asking for clarification  
19 of what that liability was.

20 CHAIRMAN BECHHOEFER: I have just one or two  
21 follow-up questions and they want to take an afternoon  
22 break.

23 MS. CARROLL: When you say follow-up questions,  
24 you didn't think I was through, did you?

25 CHAIRMAN BECHHOEFER: No, just clarification

1 question on this July 19, 1990 meeting. First, were you in  
2 a position -- did you vote for that structural change or  
3 were you not in a position to?

4 THE WITNESS: I was not a voting member.

5 CHAIRMAN BECHHOEFER: I see, okay.

6 THE WITNESS: Basically at that meeting, I was  
7 observing, I was introduced to the Committee and some of  
8 these issues like the restructuring and the liability  
9 questions were left over from previous meetings, as I  
10 understood.

11 CHAIRMAN BECHHOEFER: Okay, I think we'll take  
12 a break and come back and continue.

13 MR. TURK: May I approach the bench for a  
14 moment, Your Honor, off the record?

15 CHAIRMAN BECHHOEFER: Yeah, off the record.

16 (A short recess was taken.)

17 CHAIRMAN BECHHOEFER: Back on the record.

18 BY MS. CARROLL:

19 Q I'd like you -- I entered into the record a  
20 letter that confirmed a verbal praise from the NRC that you  
21 received through your program at the University of  
22 Virginia. I would like to ask you to tell us what you  
23 remember about the NRC.

24 A Well, in my time at the University of Virginia,  
25 I thought it was in my viewpoint a successful radiation

1 safety program. We had some -- we had numerous  
2 inspections, as everybody does. The reactor was just part  
3 of the radiation safety program at Virginia. In fact, the  
4 part on the campus was a bigger percentage of the job than  
5 the reactor because we had much more research going on.  
6 But the reactor health physics was similar, we were  
7 inspected many times. We had some incidents, as every  
8 facility has, but in general, I thought we had a good  
9 program, that was my impression and I think that the  
10 reactor facility directors, the two directors I worked  
11 with, Dr. Mulder and his predecessor, were -- both thought  
12 the same.

13 Q Did the NRC ever say that they used the  
14 University of Virginia program as an example for other  
15 universities?

16 A I was told that they took some of our  
17 procedures and used them for sort of outlines for other  
18 facilities to follow, that was verbal conversation with an  
19 inspector. I think it might have been a radioactive  
20 materials license inspector. Both of them inspected the  
21 reactor, since there was both things going on.

22 Q Did they say that you had an exemplary program  
23 there?

24 A We were told -- I was told several times that  
25 the program was very good, from the inspectors, yes.

1 Q And that's what Dr. Mulder was referring to in  
2 that letter, as you understand it?

3 A Yes. He heard that and the -- also, I think  
4 the main thing that the letter points out, in my view, is  
5 that there was a good relationship between myself and the  
6 reactor director there.

7 Q Did you ever see Dr. Revsin go in the reactor  
8 room in your time?

9 A At Georgia Tech?

10 Q Uh-huh.

11 A I don't believe so. Maybe once on the first  
12 trip through there.

13 Q On the tour?

14 A Yes.

15 Q Do you believe she focused on procedures  
16 possibly at the expense of other aspects that would be  
17 required to run a good safety program?

18 A My personal opinion was that she was very  
19 focused on procedures and was less of a what might be  
20 termed a hands-on health physicist than I was used to  
21 being.

22 Q Did focus on technical aspects suffer for an  
23 aspect on procedures, in your mind?

24 MR. TURK: Objection. Are we talking about in  
25 his running of the program or is she talking about the



1 NRC's evaluations?

2 MS. CARROLL: I'm talking about, it would be  
3 during his time frame as MORS when Dr. Revsin was employed  
4 by Georgia Tech. So it'd be when she was assistant  
5 director of the reactor.

6 A Well, when I was at Georgia Tech, I was doing  
7 the radiation safety duties, so I can't say how she  
8 conducted things before I got there, but I did get that  
9 impression from interactions with her, that she was --  
10 tended to be more focused on that -- on the area of  
11 procedures. It's sort of, you know, health  
12 physics/radiation safety is part art and part science and  
13 different people have different ideas of where to put the  
14 emphasis. Hers was more in the line of documentation and  
15 procedures because she had come from the background  
16 possibly of inspecting, where that was very important.

17 Q When you came on board as MORS, did you  
18 possibly catch anything that she had missed when she was an  
19 NRC inspector?

20 MR. TURK: Objection, no foundation that  
21 something existed before he came.

22 CHAIRMAN BECHHOEFER: Yeah, I think that's  
23 correct. You have to establish a foundation.

24 BY MS. CARROLL:

25 Q When we spoke, you mentioned that there was

1     some tension between you --

2                   MR. EVANS:  Objection to the leading question.

3     The witness is testifying about some --

4                   MS. CARROLL:  I'm trying to give a basis.

5                   CHAIRMAN BECHHOEFER:  She can establish the  
6     basis for her question.  We haven't heard the question yet.

7     BY MS. CARROLL:

8                   Q       When we spoke, you mentioned tension between  
9     you and Revsin that had existed for awhile prior to your  
10    leaving, and you articulated wondering if you -- or you  
11    speculated that you might have caught something -- you said  
12    it more positively than this -- I'm fishing as an artist in  
13    a legal arena, and maybe it's immaterial.

14                   But she had been an NRC inspector, had  
15    inspected that facility, and your letter indicates that you  
16    were discouraged from documenting observed safety  
17    regulations.

18                   A       I think what you're referring to is --

19                   MR. EVANS:  Objection, I don't think there's  
20    been a question.

21                   CHAIRMAN BECHHOEFER:  The question hasn't been  
22    asked yet.

23                   MR. EVANS:  I heard some testimony from counsel  
24    but I haven't heard any question to the witness.  I move to  
25    strike the testimony of counsel and request, respectfully

1 request counsel be directed to ask questions.

2 CHAIRMAN BECHHOEFER: As background for a  
3 question, as a predicate, it can stand, but we haven't  
4 heard a question yet.

5 BY MS. CARROLL:

6 Q Do you feel that your strict approach to  
7 violations was appropriate, given Georgia Tech's recent  
8 prior history?

9 A Yes, more than appropriate.

10 MS. CARROLL: I don't understand this question.  
11 I mean, we've already established that, as I understand it.

12 BY MS. CARROLL:

13 Q And you felt that problem was the reason  
14 Georgia Tech had brought you on?

15 A Well, they needed somebody -- I felt they  
16 needed someone to concentrate solely on radiation safety.  
17 Dr. Revsin may have wanted to do other things in terms of  
18 reactor management and promotion. I knew that many of the  
19 staff that were there before were not there because of that  
20 incident.

21 Q Do you feel that reactor promotion is an  
22 appropriate task for a radiation safety officer?

23 A Not for a radiation safety officer.

24 Q Well, for an MORS?

25 A No. I think it's more a task appropriate for

1 the director or someone in reactor operations or the  
2 university management.

3 Q Do you think that -- everybody knows what I  
4 want and I'm going to sit here and take up everybody's time  
5 until I get the question right to get it out.

6 MR. TURK: May I note, Your Honor, that I have  
7 no objection to Ms. Carroll taking all the time she needs,  
8 but we will have cross examination and the witness has  
9 indicated he has a flight tomorrow at 3:30, I believe he's  
10 clarified to me. So if Ms. Carroll takes up all the time  
11 she wants, she should be prepared that we may not be able  
12 to finish our cross examination in time to let the witness  
13 leave at 3:30.

14 MS. CARROLL: I've had two and a half hours and  
15 I'll take my time. This is the direct and if the cross  
16 examination makes him run over, that's regrettable and I  
17 hope it won't happen.

18 I'm going to -- once I relinquish this chair,  
19 but I'm going to make sure -- I think that's my only  
20 question I'm trying to get out, but let me make sure.

21 (Brief pause.)

22 BY MS. CARROLL:

23 Q Is it possible that your findings may have been  
24 missed by the NRC, possibly even Dr. Revsin herself, prior  
25 to --

1 MR. TURK: Objection. I'm not sure which  
2 findings she's referring to.

3 MS. CARROLL: The findings in the -- well, one  
4 was an incident -- the findings of Tim Hammond of the high  
5 radiation areas that hadn't been properly -- that needed  
6 attention, needed either restrictions, alarms or whatever,  
7 as indicated in the July 26 inspection report.

8 BY MS. CARROLL:

9 Q Is it possible that had been missed by the NRC  
10 and you found it when you came in?

11 MR. EVANS: I object. That calls for rather  
12 rank speculation as to what the NRC inspector may or may  
13 not have seen. How is this witness going to know what an  
14 NRC inspector did or did not see?

15 CHAIRMAN BECHHOEFER: I don't see how he can  
16 answer that question.

17 BY MS. CARROLL:

18 Q Following the inspection and a verbal exchange  
19 with Dr. Karam in the hall, which you were told --  
20 suggested not to document -- were you then assigned largely  
21 to writing procedures?

22 A Not assigned, I was informed of the importance  
23 to write -- that we had procedures that needed to be  
24 written and then this memo of October 5 was where it was  
25 actually put into writing that more procedure writing was

1 expected.

2 Q Did you agree with the ratio of procedure  
3 writing to other tasks you would normally perform in this  
4 function of MORS?

5 A It was my opinion that regulatory compliance  
6 was the first thing to establish in a facility and then --  
7 procedures are very important and they have to be kept up  
8 to date and that has to be done along with the regulatory  
9 compliance. It's a balancing act. Again, it depends on  
10 what the current state of the facility, the current state  
11 of the procedures. I would say that procedures can't be  
12 the exclusive job of a radiation safety officer, the RSO,  
13 or manager of radiation safety has to get out and do  
14 surveys and be hands-on and work with the people in the --  
15 the operators, that sort of thing.

16 Q Did you feel pressured on the procedures to  
17 where you thought you had a hard time being sure that they  
18 would be happy with you if you did the other parts of your  
19 task at the level that would make you comfortable?

20 A Well, I think at some point I was just overall  
21 in confusion about what I was expected to be doing in that  
22 position. That was just one of the problems that I  
23 perceived, sort of a nebulous job description.

24 MR. EVANS: May it please, we could stipulate  
25 that Georgia Tech viewed a part of his job as working on



1 HP, health physics, procedures for radiation safety office.  
2 That was viewed as a part of his job. If it'll save time,  
3 we'll stipulate that.

4 BY MS. CARROLL:

5 Q I'm sorry, that distracted me and I'm going to  
6 impose that on you, that Dr. Revsin's personal interests  
7 and expertise and aptitude for procedures was imposed on  
8 you, did that make it difficult for you being aware of her  
9 heightened interest in procedures, did that make it hard  
10 for you to balance and did you feel pressured to tend to  
11 procedures more than you might naturally have been inclined  
12 to?

13 A I guess somewhat, but it wasn't an overwhelming  
14 pressure. Again it's a matter of judgment and balance as  
15 to what emphasis you put where and when you put it. Again,  
16 I was just there for a couple of months and I was  
17 personally more interested in putting emphasis on  
18 regulatory compliance first, getting that established,  
19 getting a well-run program and then filling in the  
20 procedures a little bit later.

21 Q And why didn't you do the regulatory compliance  
22 part first, since that was your inclination?

23 A Well, I was proceeding to do that, I thought,  
24 with some of these memos, and then was discouraged from  
25 doing that.

1           Q       So then following the July 26th memo, you then  
2       were discouraged verbally by Dr. Karam and you -- did you  
3       then attempt to do it their way for a few months, to see  
4       how that shook out? Is that what you just said, that  
5       that's when you stopped pursuing regulatory compliance?

6           A       Well, it was sometime after that, close after  
7       that, that I realized that all right, maybe I'll write  
8       procedures and do things a little differently. But then it  
9       was soon after that that I realized that there was really  
10      not going to be any autonomy in the position and maybe I'd  
11      made a mistake in evaluating what kind of a job this was  
12      going to be. I wasn't going to change the system and it  
13      was apparent to me that I was expected to work very -- you  
14      know, almost on a list basis of things. In fact, I was  
15      given a list of things to do and just do these tasks and  
16      that was professionally not what I was after. So I  
17      proceeded to make other plans, which I was in the process  
18      of doing when we had the meeting of October 5.

19          Q       Do you think autonomy in the position of MORS  
20      is important to the functioning of it and the safety  
21      assurances for the public?

22          A       Yes.

23          Q       Would you care to elaborate?

24          A       Well, I think if you have a professional in  
25      that position -- if you hire a professional in that

1 position, then -- and you're relying on that person's  
2 professional judgment to allocate their time and put  
3 emphasis on certain points, then autonomy is important. If  
4 that person is just doing exactly step by step what's  
5 dictated by someone else, then how can that person be  
6 really held responsible for the status of that radiation  
7 safety program, and then the facility director should be  
8 then actually named as the person responsible for radiation  
9 safety.

10 Q Did you feel -- and I'm looking at the memo of  
11 Dr. Revsin to Dr. Karam that I don't believe you were aware  
12 of until we showed it to you -- the September 28 memo, and  
13 it says -- she indicates that staff might hesitate to knock  
14 on your door. What were you doing behind that closed door,  
15 do you remember?

16 A Probably writing procedures. I mean, I think  
17 some of that is perception on her part as to what staff  
18 would or would not do. Again, at that point, I realized  
19 that I couldn't work with these particular people in this  
20 particular position and was just trying to conform to what  
21 they wanted while I was there until whatever time I could  
22 take to get another job.

23 Q Is "they" Dr. Karam and Dr. Revsin?

24 A That's correct.

25 Q And did you have any problems that you were

1     aware of with Jerry Taylor, I think Dave Cox was there.  
2     He's not mentioned in this, but the other people that you  
3     would deal with that weren't management level, did you feel  
4     comfortable in your relationship --

5             A       Yeah, I always felt comfortable around the  
6     operators and the HP people. In fact, you know, I've  
7     always viewed the reactor health physicists -- really the  
8     primary responsibility of the reactor HP is to make sure  
9     that those people are given guidance and don't get into  
10    trouble and don't jeopardize their health. That's the  
11    first priority.

12            Q       If the MORS is not given autonomy by the  
13    director, would you call that a management problem?

14            A       Yes.

15                   MR. TURK: Object. I would object and move to  
16    strike, Your Honor. There's been no foundation that the  
17    witness is an expert in assessing management. I have no  
18    problem with his personal opinion, but in terms of an  
19    expert opinion, he's not established to be qualified.

20            Q       Did you feel --

21                   CHAIRMAN BECHHOEFER: Wait, wait, wait. We're  
22    going to deny that motion. We think by virtue of having  
23    worked as a manager, he can give opinions, by virtue of  
24    experience, if nothing else.

25                   MS. CARROLL: He was manager of the office of

1 radiation safety.

2 CHAIRMAN BECHHOEFER: That's correct, we're  
3 going to overrule the objection.

4 MS. CARROLL: Do you see what's happening to  
5 me? I'm a little citizen and he's got an airline -- you've  
6 got some list of questions and you think you should have  
7 more time for questions than me. And I'm hurrying, I'm  
8 ready to cave in to you guys so he can catch his plane.  
9 Are you going to object?

10 CHAIRMAN BECHHOEFER: Wait, wait, let's go.  
11 Let's get the job done.

12 MR. TURK: No, the objection was overruled.

13 MS. CARROLL: Well, I just don't think that  
14 should be happening here.

15 MR. TURK: I have no objection to his offering  
16 an opinion based on his experience and his own personal  
17 knowledge. The objection was simply to expertise. As I  
18 understand your ruling, you're allowing him to speak based  
19 on his personal knowledge and experience. I have no  
20 problem with that.

21 CHAIRMAN BECHHOEFER: Okay.

22 MS. CARROLL: Did you get my little ranting and  
23 raving on the record?

24 THE REPORTER: Every word, couldn't miss it.

25 MS. CARROLL: Thank you. I am the loudest

1 person in the room.

2 (Laughter.)

3 MS. CARROLL: I don't want to be rushed and I  
4 don't want to take your time.

5 BY MS. CARROLL:

6 Q This list that you were given on October 5, now  
7 I think I'm really asking you to stretch out here and  
8 remember details of six years ago when I know you're well  
9 rid of this job and on to bigger and better things. But  
10 did that list, to you -- did it happen to cover everything  
11 important? There's a Germanium detector and software and  
12 revising the stack sampling procedure which we would still  
13 like to see that done, I believe --

14 ADMINISTRATIVE JUDGE KLINE: What are you  
15 reading from?

16 MS. CARROLL: I'm reading from GANE's Number  
17 12, the October 5 memo to Dr. Copcutt from Dr. Karam.

18 BY MS. CARROLL:

19 Q And the list here, which you've already stated  
20 that working from a list just struck you kind of queer as a  
21 professional and as one who thought you could be -- you  
22 know, use your judgment and move as you saw the priorities.  
23 Now what I would like to ask you is was this list  
24 comprehensive to you, did it cover every ding-dong  
25 important thing or did it miss the point? Did you see



1 stuff maybe that they didn't list that you would have made  
2 a priority? And if so, you might want to --

3 MR. EVANS: I think I have to object to a  
4 compound question, multiple compound question. We've had  
5 at least five questions running into each other. I think  
6 we should have just single questions at a time, please.

7 MS. CARROLL: Super. I find it easiest to  
8 suffer, I find it easiest to phrase it and ask him, but  
9 I'll do it if that's what's required.

10 CHAIRMAN BECHHOEFER: I didn't understand  
11 exactly what you're asking.

12 BY MS. CARROLL:

13 Q Did you understand? Is this list comprehensive  
14 to you, or would there maybe be something missing?

15 A It's fairly comprehensive, it covers everything  
16 from procedures to training to calibrations.

17 Q So your objection to it wasn't that they were  
18 asking you to do things that weren't actually appropriate  
19 for you to do?

20 A No.

21 MR. EVANS: Hold it, hold it. I object to  
22 leading the witness -- counsel is testifying about asking  
23 him to do something inappropriate and that's testimony and  
24 should be stricken for that reason. Counsel is not under  
25 oath, and besides, counsel is quite wrong.

1 MS. CARROLL: I didn't follow any of that, but  
2 I don't think he understood my question.

3 MR. EVANS: That may be so. Please repeat it.

4 CHAIRMAN BECHHOEFER: Why don't you repeat the  
5 question?

6 BY MS. CARROLL:

7 Q So the list wasn't inappropriate, but at your  
8 level of professionalism, it seemed -- I actually feel like  
9 you probably articulated your feelings previously on it, so  
10 maybe I can say was it a comprehensive list, you said it  
11 was.

12 MR. EVANS: Oh, Lord.

13 MS. CARROLL: It's going to be a long two  
14 weeks, Mr. Evans.

15 MR. EVANS: If the questioning goes like this,  
16 it will.

17 MS. CARROLL: Might be three.

18 MR. EVANS: Oh, yeah, three at least.

19 BY MS. CARROLL:

20 Q In order to bear ultimate responsibility for  
21 something, isn't some level of autonomy necessary?

22 A I believe so.

23 Q And independence, autonomy and independence.

24 A I think it's overlapping definitions.

25 Q Oh, I asked in the wrong sequence. Back up in

1 your mind, and this is the question that preceded the one I  
2 just asked. Did you have ultimate responsibility for the  
3 safety of the reactor?

4 A No.

5 MR. EVANS: Objection, actually that's asking  
6 for a legal conclusion, which is controlled by the Georgia  
7 Tech Specs which actually -- the specs which I think are in  
8 evidence, or certainly NRC has them, because Tech has to  
9 file specifications to get a license. Those specifications  
10 put ultimate responsibility for both safety and operations  
11 in Dr. Karam. That's the law. I mean he can't vary what  
12 the law is.

13 MS. CARROLL: And he's answered truthfully as  
14 we have seen. And speculations will be made as to whether  
15 that's a safe arrangement.

16 Okay, I think I only have one question. We've  
17 been around about this before, give me an eye signal.

18 CHAIRMAN BECHHOEFER: It was framed as a legal  
19 question. I would say he can only answer as to what he  
20 thought his responsibilities were, are -- were at the time.  
21 I don't think he can give a legal opinion as to what they  
22 were or what they weren't, but what he thought they were.  
23 He can answer that if you want him to. I'm not sure you  
24 have a proper question.

25 MS. CARROLL: He convinced me. Y'all had to

1 stop and confer about it.

2 CHAIRMAN BECHHOEFER: Well, we allowed the  
3 question in part, so you can proceed.

4 BY MS. CARROLL:

5 Q This is pretty circuitous, but I would just  
6 like to bring out for the record that after you left  
7 Georgia Tech, you -- where did you go?

8 A Good Samaritan Hospital in Los Angeles,  
9 California.

10 Q And that was in 1990 -- I think you began  
11 January of '91?

12 A That's correct.

13 Q And are you still there?

14 A Yes.

15 MS. CARROLL: I hope you're happy.

16 THE WITNESS: It's an interesting job.

17 Q So your work history is basically since 1983,  
18 you've held three jobs; the University of Virginia, Georgia  
19 Tech and Good Samaritan Hospital?

20 A Three different locations, yes, as you said.  
21 At Virginia there was one period where I went from one sort  
22 of a lateral move from one place to another, from reactor  
23 to the hospital.

24 Q Was to the gamma knife physicist, which is  
25 along the lines of what you're doing now, isn't it?

1 A Correct.

2 Q So the short tenure at Georgia Tech was an  
3 anomaly in your career path so far?

4 A Yes, I believe so. I certainly didn't intend  
5 to move there for four months.

6 Q Now I only have one more question and if this  
7 doesn't work, if you give me strong eye signals, I'll not  
8 go there one more time.

9 MS. CARROLL: Did you write it for me, this  
10 question I can't quite get?

11 MR. JOHNSON: No.

12 BY MS. CARROLL:

13 Q Did you have any opinions as to why you were  
14 asked not to document regulatory violations by Dr. Karam  
15 following your inspection reports?

16 MR. EVANS: Objection unless there's some  
17 foundation laid as to how he could have an opinion or what  
18 it would be based on or whether it's pure speculation.

19 CHAIRMAN BECHHOEFER: You can answer what you  
20 thought and any basis you can give.

21 THE WITNESS: Well, obviously I had personal  
22 thoughts about it. Number one I realized that Dr. Karam  
23 was concerned about receiving future violations from NRC.  
24 If these things are documented in surveys and memos, NRC,  
25 at their discretion, can come in on an inspection and look

1 at the memos and write violations even though the items  
2 have been cleared since then -- changed. And the other  
3 possible reason, in my personal opinion, was that anything  
4 that I found wrong would reflect badly, personally on Dr.  
5 Revsin as her tenure -- during her tenure there as manager  
6 of radiation safety before I was there.

7 MS. CARROLL: Thank you. I have no further  
8 questions, Your Honor. Is that what I say here?

9 CHAIRMAN BECHHOEFER: Okay.

10 MR. EVANS: At this point, since the matter  
11 came up, couldn't -- I believe this panel can take official  
12 notice of matters of record including Georgia Tech's  
13 technical specifications, which are a part of its licensing  
14 commitments and I would like to read into the record a  
15 commitment on the point of the responsibility, being the  
16 director, the ultimate responsibility of radiation safety.  
17 I would request that the panel take official notice of that  
18 fact.

19 CHAIRMAN BECHHOEFER: If it is just a  
20 regulation we can take official notice of it.

21 MR. EVANS: It's part of tech specs, which is  
22 made a part of the licensing.

23 CHAIRMAN BECHHOEFER: I'm aware of that.

24 MR. EVANS: May I read it into the record?  
25 It's very brief.



1 CHAIRMAN BECHHOEFER: Oh, okay. Not all ten  
2 volumes of whatever --

3 MR. EVANS: Okay. It's on page 40 of the  
4 technical specifications, Georgia Tech Research Reactor,  
5 License R-97. It's under 6.0 Administrative Controls and  
6 6.1 Organization, subparagraph A. "The organization for  
7 the management and operation of the reactor shall be as  
8 indicated in figure 6.1. The director, Nuclear Research  
9 Center, shall have overall responsibility for direction and  
10 operation of the reactor facility, including safeguard to  
11 the general public and facility personnel from radiation  
12 exposure and adhering to all requirements of the operating  
13 license and technical specifications." So we can maybe put  
14 that matter to sleep forever.

15 CHAIRMAN BECHHOEFER: What is the effective  
16 date of that?

17 MR. EVANS: The effect of that is we have  
18 innuendo --

19 CHAIRMAN BECHHOEFER: Effective date?

20 MR. EVANS: Sir?

21 CHAIRMAN BECHHOEFER: The effective date of  
22 what you just read.

23 MR. EVANS: Oh, the effective date. They are  
24 the current regulations.

25 CHAIRMAN BECHHOEFER: What were they back in

1 '88 and '90.

2 DR. KARAM: The same.

3 CHAIRMAN BECHHOEFER: The same?

4 DR. KARAM: Yes.

5 CHAIRMAN BECHHOEFER: Okay. Thank you.

6 MR. EVANS: They are the current regulations  
7 and were in effect since when?

8 DR. KARAM: '88.

9 MR. EVANS: 1988.

10 ADMINISTRATIVE LAW JUDGE KLINE: Dr. Copcutt,  
11 could you clarify what the managerial relationship was  
12 between you and Dr. Revsin? In other words, did she work  
13 for you or did you work for her or neither one?

14 THE WITNESS: As far as I --

15 ADMINISTRATIVE LAW JUDGE KLINE: -- Or do you  
16 know?

17 THE WITNESS: -- understand neither one. She  
18 held the position running the radiation safety office  
19 before me, so she was -- we interfaced a lot during my  
20 start-up. She was assistant director of the facility.  
21 Again, that was a nebulous area that I wasn't really  
22 comfortable with.

23 ADMINISTRATIVE LAW JUDGE KLINE: During your  
24 tenure did you know who was listed on the license as RSO?

25 THE WITNESS: I believe it was Dr. Revsin, as

1 far as I know.

2 ADMINISTRATIVE LAW JUDGE KLINE: During your  
3 tenure you mentioned that there were certain health physic  
4 technicians that worked for you. Were they the same  
5 technicians who were present during the 1987, '88 incident?

6 THE WITNESS: I think some of them were.

7 ADMINISTRATIVE LAW JUDGE KLINE: Some were?

8 MR. EVANS: No, no. For the record, none of  
9 them were the same.

10 ADMINISTRATIVE LAW JUDGE KLINE: I'm sorry. Go  
11 ahead.

12 THE WITNESS: I guess -- I don't know.

13 ADMINISTRATIVE LAW JUDGE KLINE: If he doesn't  
14 know, he can say he doesn't know.

15 MR. EVANS: I can tell you the folks that were  
16 there in '87, there were two -- there was one head of the  
17 department and there were two radiation safety technicians.  
18 Also they had some students who worked as assistants. The  
19 two radiation safety technicians were removed as a part of  
20 the litigation that I was involved in '87 and '88 as a  
21 whistle blower case.

22 MR. TURK: Your Honor, Mr. Evans has pointed  
23 out that counsel should not testify. I think we should  
24 leave it to the witness.

25 MR. EVANS: I think we should leave it at that.

1 CHAIRMAN BECHHOEFER: I think some of that is  
2 part of the staff --

3 MR. EVANS: It's all a point of information.

4 ADMINISTRATIVE LAW JUDGE KLINE: I'm interested  
5 in knowing if he knows if they were the same technicians as  
6 during the incident?

7 THE WITNESS: I don't know.

8 MR. EVANS: But I do.

9 ADMINISTRATIVE LAW JUDGE LAM: Dr. Copcutt, the  
10 testimony is that you had been asked not to document  
11 violations. I think everyone of us here consider that an  
12 essential piece of your testimony. In the letter, one of  
13 GANE's experts, dated October 18, 1990, from Dr. Revsin to  
14 Dr. Karam, she stated in paragraph number three, second  
15 sentence, she stated, he, which meant Dr. Copcutt, was  
16 discouraged in the use of the personal manual form for  
17 documenting problems. Now, that seems to suggest that it  
18 was suggested to you not to document violations, was a  
19 formatting issue. Would you elaborate on that?

20 THE WITNESS: It is my impression that that was  
21 not the objection was not formatting. I notice the memo  
22 said something about me refusing to format in that fashion,  
23 and I -- I would not refuse to do something like that. The  
24 question was whether or not to document. It was not what  
25 format to document these things.

1 ADMINISTRATIVE LAW JUDGE LAM: A second  
2 question I have is this. You join the University on July  
3 2nd and then you tender your resignation letter on October  
4 8th, that spanned a period of 98 days to be exact. That's  
5 a reasonably short period of time. Within that time we  
6 hear today from you that there has been serious allegations  
7 of professional misconduct of people associated with the  
8 University. At the same time there has been serious  
9 allegations of professional incompetence on other minor  
10 issues. Now, these happened in a very short period of  
11 time. Is anything else that you may be able to tell us  
12 what precipitates a rapid deterioration of professional  
13 interactions like this?

14 THE WITNESS: Well, there was an environment at  
15 the facility of apprehension due to past incidents. That  
16 made everyone very sensitive to documentation of items,  
17 regulatory compliance. I really can't say what the reason  
18 for it was.

19 CHAIRMAN BECHHOEFER: Dr. Copcutt, during your  
20 period with Georgia Tech was there an employee with whom  
21 you may have been familiar or not familiar -- I'll ask you  
22 that next, but named William H. Downs?

23 THE WITNESS: Yes.

24 CHAIRMAN BECHHOEFER: Now, he, I understand,  
25 was an operator?

1 THE WITNESS: Right.

2 CHAIRMAN BECHHOEFER: Did you have any opinion  
3 about his qualifications to be an operator?

4 THE WITNESS: No, I really didn't.

5 ADMINISTRATIVE LAW JUDGE KLINE: Dr. Copcutt,  
6 when you departed Georgia Tech employment, did your direct  
7 knowledge of the management situation at Georgia Tech end  
8 at that point or do you have knowledge subsequent to that  
9 time?

10 THE WITNESS: It ended until I was contacted by  
11 Ms. Carroll in regards to this.

12 CHAIRMAN BECHHOEFER: Georgia Tech, you can  
13 start your cross examination, if you wish.

14 We're trying to figure out scheduling. We  
15 would like to end by five so that we can hear from the  
16 staff late in the day on the allegations, but we might as  
17 well start, I guess, and I think the staff has a lot of  
18 cross examination. We'll have to wait until tomorrow.

19 While these papers are being distributed, Dr.  
20 Copcutt, maybe you could answer one question. You  
21 described the radiation safety committee as either being  
22 very active or inactive as the case may be. What in your  
23 view -- How does that committee function? Is it more or  
24 less an after-the-fact audit committee, or do they have to  
25 approve experiments in advance before they are undertaken,



1 or what's the general scope of activities of the committee?

2 THE WITNESS: The committee should approve  
3 experiments that are considerably different from previous  
4 ones before they are allowed to proceed. They have to  
5 consider themselves about re-activity, radiation safety  
6 problems, any other hazards. The committee should perform  
7 routine audits of the operations, logs and physic logs and  
8 other areas, compliance. Those two things -- Oh, and then  
9 the committee should approve and contribute to any changes  
10 made in the text specs or procedures or operating  
11 procedures or any documents that will be changed in any  
12 significant way, that should be approved by the committee.

13 CHAIRMAN BECHHOEFER: I see. What you are  
14 saying, only novel type experiments, not every experiment  
15 has to be pre-approved?

16 THE WITNESS: Right.

17 CHAIRMAN BECHHOEFER: I see.

18 Okay, why don't you proceed with your cross  
19 examination.

20 CROSS EXAMINATION

21 BY MR. EVANS:

22 Q Dr. Copcutt, you did your undergraduate work at  
23 the University of Virginia, and I think you had your BA in  
24 environmental science, is that correct?

25 A Correct.

1 Q And that was in 1975?

2 A Correct.

3 Q What basically did you cover -- I'm not looking  
4 at a long talk, but basically what did you cover in  
5 environmental science? What was the focus?

6 A General physics, statistics, math, biological  
7 sciences and some specific environmental science courses.

8 Q And as I recall you got your masters degree in  
9 engineering also at the University.

10 A Yes.

11 Q And what was your specialty in your ME work?

12 A Radiological physics and health physics,  
13 really. That's been my specialty, both of those, through  
14 my graduate career, and when I was going to graduate school  
15 in Virginia, I was also working at the radiation safety  
16 office there.

17 Q And were you doing biomedical engineering?

18 A Yes.

19 Q What is biomedical engineering?

20 A Well, my specialty -- emphasizing was  
21 radiological physics which is medical physics support for  
22 radiation therapy operations.

23 Q And when you worked on your doctorate and did  
24 indeed receive your Ph.D. from Texas A&M --

25 A Yes.

1 Q From Wahoo to Aggie, and that was in 1983,  
2 correct?

3 A Correct.

4 Q And was this also in bioengineering?

5 A Yes. Again, the specialty was medical in  
6 health physics. They often put that in departments like  
7 bioengineering or nuclear engineering.

8 Q Is bioengineering or biomedical engineering, is  
9 that the same as health physics?

10 A No, it's generally -- the majority of people in  
11 that program were doing more strictly biomaterials work,  
12 biomechanics work, that sort of thing. They just put bio -  
13 - medical physics and health physics in there.

14 Q And what was the focus of your doctoral work at  
15 Texas A&M?

16 A It was concerning developing of a computer  
17 operated multiple isotope counting system to count  
18 radioactive material ingested in laboratory animals.

19 Q Did you work on neutron radio therapy.

20 A Yes, also that.

21 Q And did you treat -- Were you involved in the  
22 treatment of patients in that program?

23 A Yes, we treated a large number of patients from  
24 M.D. Anderson Hospital who came to Texas A&M for this  
25 experimental protocol.

1 Q That's in Houston, the hospital?

2 A Yes, they came to College Station.

3 Q And what sort of patients were they?

4 A They were very advanced cancer patients, head,  
5 neck, cervix, breast.

6 Q In your judgment is this a promising area for  
7 research?

8 A The neutron therapy pilot project at Texas A&M  
9 spawned an actual working neutron clinical generator at  
10 M.D. Anderson and they still use neutron therapy at a  
11 number of sites.

12 Q Would you agree that it is in the public  
13 interest for nuclear research to continue in the area of  
14 radiation therapy for cancer patients?

15 A Oh, yeah, absolutely.

16 Q When you were at Georgia Tech, had they started  
17 any program with Emory at that time? Emory University?

18 A No. I think they got funding for that after I  
19 left.

20 Q Now, is it fair to say that your education is  
21 focused primarily toward the medical or therapeutic use of  
22 radiation?

23 A I would say almost evenly -- Well, if I could  
24 put a percentage, 35/65, 35 percent health physics, 65  
25 percent medical physics because I took numerous health

1 physics courses and worked in the radiation safety office.

2 Q Speaking of the discreet area of health  
3 physics, this is something, is it not, where a person can  
4 go on and get a master's and Ph degree in health physics?

5 A Yes.

6 Q But this wasn't the educational role you took  
7 at Virginia or Texas A&M?

8 A Well, I think at that time there wasn't a  
9 separate health physics program at Texas A&M. Many health  
10 physics programs, as I said, were stuck in nuclear  
11 engineering or bioengineering or biophysics or somewhere  
12 else. I always considered it a double specialty.

13 Q And am I correct that upon receipt of your Ph.D  
14 at Texas A&M in 1983 you returned to Mr. Jefferson's  
15 university for your first employment?

16 A Correct.

17 Q And you were radiation safety officer from when  
18 you arrive, 1983, to July 1989; is that correct?

19 A Yes.

20 Q And what were your responsibilities as  
21 radiation safety officer at the University of Virginia?

22 A I oversaw the operation of the radiation safety  
23 program on the campus at the medical center and at the  
24 research reactor. I was employed as a member of the  
25 Environmental Health and Safety Office, which covered all

1 the hazard areas of the University, chemical safety, fire  
2 safety, etcetera.

3 Q And in 1989, July, I believe, you moved, I  
4 guess you'd say, laterally in the University to the -- I  
5 may be mispronouncing it, the Lars Leksell Radiosurgery  
6 Unit at the Medical Center.

7 A Correct.

8 Q And you are also in the oncology department?

9 A Radiation oncology.

10 Q And oncology, that has to do with cancer,  
11 doesn't it?

12 A Correct.

13 Q And what were you doing when you were at the  
14 Medical Center as contrasted with when you were RSO?

15 A At the Medical Center I was doing medical  
16 physics calculations and support for the gamma knife  
17 radiosurgery unit, which was just installed at the  
18 University of Virginia at that time, and I got interested  
19 in that unit when I oversaw the installation of the  
20 radiosurgery unit as radiation safety officer and I thought  
21 it would be interesting to get involved clinically.

22 Q And was the -- Were you basically using gamma  
23 radiation?

24 A Yes, Cobalt 60.

25 Q Cobalt -- Cobalt 60?



1 A Yes.

2 Q Is it true that radiation from a reactor can be  
3 used as well as radiation from Cobalt in the treatment of  
4 cancer?

5 A You can use neutrons which come from a reactor.  
6 The neutron therapy we tested at Texas A&M came from  
7 cyclotron and there is a technique called boron capture  
8 neutron therapy, which is being currently researched to be  
9 used as a reactor as a source for neutrons.

10 Q And I take it you started at Georgia Tech in  
11 July 1990?

12 A Yes, July 2.

13 Q You had some correspondence in the preceding  
14 Spring, around March, correct?

15 A Correct.

16 Q I believe those documents are in evidence.  
17 Now, your position at Tech was manager of Radiation Safety  
18 Office, is that correct?

19 A Manager, Office of Radiation Safety and Senior  
20 Resource Scientist.

21 Q Excuse me. I had my words backwards. You had  
22 an increase in salary in going to Georgia Tech?

23 A That's true.

24 Q And your salary at Georgia Tech was  
25 approximately \$65,000?

1 A Yes.

2 Q Now, before going to Georgia Tech you were  
3 already aware of differences in the general operation  
4 between Tech and UVA, were you not?

5 A Somewhat, but not in detail. I was aware that  
6 they didn't have medical center, it's a smaller campus  
7 program.

8 Q Wasn't there -- You found -- Before you went  
9 you knew there was a difference in emphasis, correct?

10 A I knew the emphasis would be on the reactor  
11 because that was the major portion of the job.

12 Q And is it fair to say at the University of  
13 Virginia the greater -- your greater work was really at the  
14 Medical Center research laboratory as opposed to the  
15 research reactor. Is that correct?

16 A Probably each had a third, so two-thirds.

17 Q And Georgia Tech was kind of the other way  
18 around?

19 A Right. Exactly.

20 Q And you knew before you went to Georgia Tech  
21 that the emphasis or the focus of your work would be to a  
22 very large part on the reactor?

23 A Right.

24 Q And Georgia Tech was very different from a  
25 viewpoint of your independence in performing your

1 responsibilities, wasn't it --

2 A Yes.

3 Q -- from Virginia?

4 A Yes, it was, although I didn't fully realize  
5 that when I first took the job.

6 Q Is it fair to say that it wasn't too long after  
7 your arrival at Georgia Tech that you had communications  
8 about a position with the Good Samaritan Hospital in Los  
9 Angeles, California?

10 A I had communications -- I can't document  
11 exactly when that happened, but I had communications with  
12 them, I know definitely concerning that position in  
13 September.

14 Q September?

15 A Yes.

16 Q So if you started July 1st, it was in the third  
17 month of your presence at Georgia Tech?

18 A Yes.

19 Q July, August, September.

20 A Yes.

21 Q From the time you can recall.

22 A That's correct. I was also doing consulting  
23 and they were loading a gamma knife there, and I was doing  
24 consulting for the company that was loading their gamma  
25 knife, so I may have known the gamma knife was going in

1     there, but not with the management of the hospital until  
2     then, I think.

3             Q       And you resigned from Georgia Tech by letter  
4     dated August 8th, 1990, correct?

5             A       October 8th?

6             Q       Excuse me. You resigned by a letter dated  
7     October 8, 1990.

8             A       Yes.

9             Q       And the effective date of you resignation was 2  
10    November, and this was all after you had been in contact  
11    with the Good Samaritan Hospital?

12            A       Yes, it was.

13            Q       And your starting salary at the Good Samaritan  
14    Hospital was \$125,000?

15            A       It was \$100,000 -- I thought about it.

16            Q       And you have since had an increase to?

17            A       150,000.

18            Q       One hundred fifty. The starting salary at the  
19    Good Samaritan Hospital, that was getting close to double  
20    what you were earning at Georgia Tech, correct?

21            A       Not quite.

22            Q       Well, I agree, not quite, but pushing it?

23            A       It was more.

24            Q       Considerably. Now, wasn't the doubling -- the  
25    close to doubling of your salary from 65 to 100 thousand,

1     wasn't that really the primary reason for your departure  
2     from Georgia Tech and heading out west to California?

3             A       When I submitted my resignation I had not  
4     signed a contract with them.  Although I had talked to them  
5     about the job and they seemed interested, I didn't have any  
6     set salary that they were going to pay me, and you know,  
7     we've talked ranges.  So when I left I had some idea that  
8     there was something there for me to go to, but it wasn't in  
9     concrete and I was quite worried at the time that I  
10    resigned from Georgia Tech that I could be left with  
11    nothing for some -- and in fact I didn't start at Los  
12    Angeles until January.  So they left me with a couple of  
13    months of unemployment.

14            Q       But the pay was a consideration in your  
15    resignation from Georgia Tech, wasn't it?

16            A       Well, I knew there was a possibility of another  
17    job there, but I didn't know that it was a certainty and I  
18    hadn't signed a contract with them.  I can't say that.  Had  
19    all other things been left the same, I would not have  
20    resigned at that time.

21            Q       Do you think that the increased salary might  
22    have been something that you had on your mind when you were  
23    considering the position out there at the time you were  
24    still working at Georgia Tech?

25            A       I'm sure I had it on my mind that if I could

1 get a position somewhere doing something in medical physics  
2 and it paid more that it would be a good change.

3 Q Would you agree with the answer, "Well, yes,  
4 obviously pay is a consideration."?

5 A Yes.

6 Q Now, in addition to the substantial pay  
7 increase, is it fair to say that you were also disenchanted  
8 by the organizational set-up at Georgia Tech as contrasted  
9 to the University of Virginia with respect to your position  
10 of manager of the Office of Radiation Safety?

11 A Yes.

12 Q You felt you were being micro-managed by the  
13 director of the center. Correct?

14 A That's correct.

15 Q And in Virginia -- Excuse me -- At the  
16 University of Virginia, health physics was administratively  
17 separate from the head or director of the reactor facility,  
18 correct?

19 A Yes, he was.

20 Q And this was all different in Georgia, correct?

21 A Yes.

22 Q And you had management constraints at Georgia  
23 Tech you did not have at Virginia, correct?

24 A Yes, that's correct.

25 Q And you didn't have the organizational freedom



1 to manage and implement the radiation safety program in the  
2 mann in which you wanted to implement it in at Georgia  
3 Tech. Is that correct?

4 A That's true.

5 Q And these are things that weighed on your  
6 mind --

7 A Yes.

8 Q -- about, as you said earlier, maybe being a  
9 square peg in a round hole or vice versa?

10 A Yes.

11 Q Now, have you ever been in the military?

12 A No.

13 Q Have you ever heard the expression, running a  
14 tight ship?

15 A Yes.

16 Q And would it be your view that Dr. Karam, as  
17 director of the Neely Nuclear Research Center, runs a tight  
18 ship?

19 A I would say that probably the way that the  
20 reactor facility is run is more akin to a military type  
21 organization than other types, yeah.

22 Q Which is where the phrase tight ship comes  
23 from, correct?

24 A Yes.

25 Q And other people call it hands-on management

1 style, correct? You've heard that expression?

2 A I've heard that expression. I don't know if I  
3 would call it that.

4 Q And as a part of this managerial style, is it  
5 fair to say that Dr. Karam wants to know about everything  
6 that is going on at the reactor?

7 A He indicated to me that he wanted to know in  
8 great detail about the health physics activities that I was  
9 responsible for.

10 Q And he wanted you to report any and all  
11 problems to him directly, didn't he?

12 A Yes.

13 Q And this would include safety concerns,  
14 correct?

15 A Yes.

16 Q He also wanted to be personally involved in the  
17 resolution of problems. Is that not correct?

18 A I assume so, yes.

19 Q Well, he did resolve a lot of the problems that  
20 you had raised basically himself, did he not? Did he not  
21 come up with a solution?

22 A He -- Yeah, he -- Well, some of the problems  
23 had already been resolved, the contamination. The other  
24 problem of the high radiation areas, he authorized me to  
25 proceed as I recommended.

1 Q And I believe you don't know of any instance  
2 where his solution of a problem was improper or inadequate,  
3 do you?

4 A No.

5 Q But all of this was very different from what  
6 you experienced at the University of Virginia, correct?

7 A Yes, it was.

8 Q At Georgia Tech you had to keep Dr. Karam as  
9 well as, I guess, Dr. Revsin informed about everything you  
10 were doing, correct?

11 A Yes.

12 Q And the follow-up on actions?

13 A Uh-huh (affirmative).

14 Q And they wanted you to inform them as to where  
15 you were at all times?

16 A Yes.

17 Q And you were supposed to clear memorandums or  
18 memos with Dr. Karam before they were released, correct?

19 A Correct.

20 Q And didn't he really want to discuss memos  
21 first?

22 A I don't know what he really wanted, but I  
23 wasn't to just write a memo and submit it.

24 Q And isn't it true that your attitude was that  
25 Dr. Karam and Dr. Revsin were putting in a lot of effort to

1 controlling everything that went on at the reactors?

2 A Yes.

3 Q And this included controlling your program as  
4 manager of the Office of Radiation Safety?

5 A Yes.

6 Q Is it fair to say that you did not like this  
7 operational format which you found at Georgia Tech?

8 A I -- Well, it wasn't what I had been used to,  
9 but also I objected to the fact that if I was going to be  
10 given priorities and told in detail how to do the function  
11 of the job, then I didn't want to be held overall  
12 responsible for the -- for any problems of the program in  
13 the future, and I noticed that one of the people that had  
14 been removed previously was the radiation safety officer  
15 when they had the -- and some radiation safety personnel --  
16 as a result of the previous incident with the contamination  
17 in 1988, and I noticed that it wasn't the director that  
18 took the responsibility there. It was those people. So I  
19 didn't want to take that responsibility without being able  
20 to run the program.

21 Q But the bottom line is, you did not like -- The  
22 format you found in place at Georgia Tech, you really  
23 didn't like it, from your own professional view?

24 A No, that's correct.

25 Q And I take it this made it a lot easier for you

1 to accept the almost doubling of your salary and moving to  
2 Los Angeles?

3 A It was -- Yes, I knew that I wasn't going to  
4 stay at Georgia Tech and I knew I had to go to something  
5 else. Whether or not that job panned out, I would have gone  
6 onto something.

7 Q Now, the first document I'd like to ask you  
8 about, you've already been examined about and I'm going to  
9 try not to repeat any questions, is Georgia Tech 21, which  
10 is the -- I guess you would call it the Brian Copcutt's  
11 performance evaluation. It's already in evidence as some  
12 exhibit or other by GANE but I can't conceivably keep in my  
13 mind what their exhibit numbers are, particularly when I  
14 have tried to outline the cross examination.

15 (The document referred to was marked  
16 for identification as Georgia Tech  
17 Exhibit No. 21.)

18 BY MR. EVANS:

19 Q Now, I take it since you've discussed it,  
20 you've already seen a copy of Georgia Tech 21?

21 A Yes.

22 MR. TURK: For clarification, is this the  
23 October 5, 1990 memo?

24 MR. EVANS: Yes. I'm sorry. It's the October  
25 5, 1990 memo from R.A. Karam to the file, re: Dr.

1 Copcutt's performance, which is basically a performance  
2 evaluation.

3 CHAIRMAN BECHHOEFER: It's GANE Exhibit 12, for  
4 clarification. GANE Exhibit 12.

5 MR. EVANS: I don't even want to know what GANE  
6 exhibit it is.

7 MS. CARROLL: That's part of the problem.

8 CHAIRMAN BECHHOEFER: So people can tie them  
9 together.

10 MR. EVANS: They have a copy of my exhibits, so  
11 they can use those.

12 CHAIRMAN BECHHOEFER: I know. I know.

13 BY MR. EVANS:

14 Q This is basically a performance evaluation,  
15 correct?

16 A Yes. Part performance evaluation and part  
17 outline of proposed projects.

18 Q And you received this on October 5th?

19 A Correct.

20 Q Or thereabouts. I don't know if you --

21 A I think it was that day.

22 Q And you resigned three days later?

23 A That's right. On a Monday.

24 Q And is it fair to say that Dr. Karam reviewed  
25 this memo with you item by item?



1           A       In great detail.

2           Q       What is your view about the stated perception  
3 of the nuclear reactor staff that you were too often not  
4 available to give guidance or direction for radiation  
5 protection programs? That's on page 1. I'm just trying to  
6 get your reaction to this perception of the nuclear reactor  
7 staff.

8           A       Well, I think they, as well as myself was  
9 confused about who they should go to, Dr. Revsin or myself.

10          Q       Okay.

11          A       That may have been their perception. I don't  
12 know.

13          Q       And I won't ask you about the criticism about  
14 your being late to work a lot. You've already covered that  
15 and I agree with you that that's probably not the end of  
16 the world one way or the other.

17                   What about not letting the secretary know where  
18 you were when you weren't in the office?

19          A       I think that must have involved times that I  
20 went to the cafeteria for lunch or stopped in the library  
21 to look up regulations and that sort of thing.

22          Q       Would you agree with the comment on page 2 that  
23 emergencies can occur without warning which makes knowledge  
24 of your whereabouts very important?

25          A       I would say if that's the case, then I should

1 have been on a 24-hour beeper or something of that nature.  
2 What happens when I leave at 5:00?

3 Q Would it not be possible that emergencies have  
4 one procedure for their resolution other than during office  
5 hours and a separate methodology for resolution during  
6 office hours?

7 A Well, I don't object to the fact that there's a  
8 need for me to be in touch. I just think it could have  
9 been handled easily with a beeper. I don't have any  
10 objection to it. It was, in fact, the first time I was  
11 made aware of the problem, if it was a problem.

12 Q On item 3, which has to do with increasing your  
13 output as to immediate responses to radiological  
14 occurrences and developing programs; you've already  
15 testified about they expected you -- and I think we've  
16 stipulated that you were expected to develop procedures.  
17 You've talked in terms -- you mentioned the word  
18 priorities. I would like to ask you, looking at -- looking  
19 at priorities, is it not fair to say that this was not  
20 supposed to be in lieu of meeting regulatory demands but it  
21 was supposed to be something that you were doing in  
22 addition to meeting regulatory demands, is that not a fair  
23 statement?

24 A I suppose that's a true statement. There's  
25 some overlap. Some of these things are regulatory

1 requirements also.

2 Q Well, I'm referring specifically to the  
3 sentence it is not in the Center's best interest to try to  
4 only meet regulatory demands however arduous meeting these  
5 demands may be. We must go beyond that to participation in  
6 education programs. Do you have any objection to the -- do  
7 you think it's wrong to --

8 A No.

9 Q -- try and develop educational programs?

10 A No, but I would have considered that a much  
11 lower priority than the one which should have been  
12 undertaken three months after a new person comes on.

13 Q And would you agree that developing health  
14 physics procedures is a vital part of your position?

15 A Yes.

16 Q Can you document or have any sort of coherent  
17 plan for reporting anything without procedures?

18 A No, but the fact is, there was a complete set  
19 of procedures in place at the time. Most of what their  
20 talking about here was updating procedures through  
21 changing.

22 Q In your experience, doesn't -- take the NRC,  
23 don't they change regulations yearly?

24 A Not the essential regulations but, yes, you  
25 have to keep the procedures updated and it's an ongoing

1     thing, but it's again a question of priority.

2             Q       What about the need for better communication  
3     among top management at the Center? Do you have any  
4     feeling about what was meant by that?

5             A       I assume it was meant that I was not  
6     communicating everything -- my activities in great enough  
7     detail to Dr. Karam and I suppose Dr. Revsin both.

8             Q       And is it not true that this critique was not  
9     something you took as putting your employment in jeopardy,  
10    did you?

11            A       No, I didn't see it as something immediately  
12    putting my employment in jeopardy.

13            Q       Well actually, didn't Dr. Karam express his  
14    regrets in trying to keep you from resigning when you  
15    announced it a few days later?

16            A       Yes, I think so.

17            Q       He wanted to keep you, didn't he?

18            A       Yes.

19            Q       At this time, of course, you had already been  
20    in contact with the Good Samaritan Hospital. This is in  
21    October and your contact started in September. So you had  
22    been in contact -- at this particular time, you had been in  
23    contact with the Good Samaritan Hospital for at least a  
24    month?

25            A       Yes.

1 Q Probably closer to two?

2 A Yes.

3 Q At least a month?

4 A Yes.

5 Q Is it fair to say that the message that you got  
6 from this performance evaluation was that you were going to  
7 have to work within the framework of the system as it  
8 existed at the Neely Nuclear Research Center?

9 A Yes, the system as it was being implemented.

10 Q Yes, the system which was in place when you  
11 arrived, correct?

12 A Yes.

13 Q And as you saw it, the message was that the  
14 Nuclear Research Center was going to be run in the manner  
15 in which Dr. Betty Revsin and Dr. Karam wanted it run?

16 A That's right.

17 MR. EVANS: Now, I would tender into evidence  
18 GT 21, which is the performance report. I apologize again  
19 for duplication, but I know of no way around it.

20 CHAIRMAN BECHHOEFER: At this point, let me  
21 just raise the question of timing. At some point we're  
22 going to have to break in your cross examination and start  
23 again tomorrow morning.

24 MR. EVANS: I'm done with one topic. I was  
25 frankly going to go on to the resignation letter at this

1 point. I'm at your disposal.

2 CHAIRMAN BECHHOEFER: Off the record for a  
3 minute.

4 (Discussion off the record.)

5 CHAIRMAN BECHHOEFER: Let's go back on the  
6 record. Mr. Turk.

7 MR. TURK: Ms. Carroll just inquired of me  
8 while we were off the record whether the Board had directed  
9 the staff to make Ms. Long available for examination and I  
10 indicated to Ms. Carroll that's it my understanding that  
11 her order of April 30th does direct the staff to make her  
12 available.

13 MS. CARROLL: Well, how does she know when?

14 CHAIRMAN BECHHOEFER: Well that's we're  
15 discussing. We're amenable to any convenient time.

16 MR. TURK: Before we get to that -- the  
17 question of schedule. I would simply note that again as I  
18 mentioned in the prehearing conference that we do not  
19 believe that exceptional circumstances exists to require  
20 her attendance. I certainly will abide by your ruling if  
21 your ruling is not reconsidered. I really believe that the  
22 testimony that the staff will present does go into the same  
23 areas. It does provide an explanation of what Ms. Long's  
24 objections were to her inspection findings being handled in  
25 the way they were and I do not see a need for an additional



1 witness to come forward. I will certainly abide by  
2 whatever your ruling is on that point.

3 CHAIRMAN BECHHOEFER: We could schedule her to  
4 be the first witness after Dr. Copcutt. We're projecting  
5 that Dr. Copcutt may be here until maybe even 1:00. Well,  
6 he would have to leave for the airport by 2:00 or 2:30, I  
7 guess. We might go straight through if necessary to finish  
8 and then have a late lunch, but we don't know that it'll  
9 take that long.

10 MR. TURK: Your moving past my inquiry as to  
11 whether on reconsideration you still believe there are  
12 exceptional circumstances.

13 CHAIRMAN BECHHOEFER: We believe there are. We  
14 believe that Ms. Long's view of particular events may be  
15 different from the official staff view, even of people that  
16 were there at the time. But, I would think sometime after  
17 2:00 would be reasonable tomorrow afternoon.

18 MS. CARROLL: I would even say -- I don't know  
19 how long y'all will tie Dr. Copcutt up. I think our  
20 reexamination so far -- or redirect is a few questions and  
21 they are very succinct at this time. So, I would ask Ms.  
22 Long to appear after lunch unless I missed something in --

23 CHAIRMAN BECHHOEFER: It will be -- we were  
24 saying after lunch.

25 MS. CARROLL: Okay. But you said 2:00, why not

1 1:00? I mean --

2 CHAIRMAN BECHHOEFER: Because Dr. Copcutt is  
3 not going to be through in time and we need to take a lunch  
4 break.

5 MS. CARROLL: Okay. If that's --

6 CHAIRMAN BECHHOEFER: My guess is of the total  
7 two to three hours of cross examination by the staff --  
8 maybe not that much. But if it's that much, then there's  
9 no more hours.

10 MS. CARROLL: Okay.

11 CHAIRMAN BECHHOEFER: The Board has a few more  
12 questions itself, although some of them have been asked  
13 already.

14 MS. CARROLL: All right. I just don't want to  
15 have any down-time.

16 MR. TURK: I would think just to be safe,  
17 scheduling here after lunch would be appropriate. It may  
18 be that my cross will be less than I imagine because Mr.  
19 Evans is going through many of the areas that I had  
20 outlined for myself and I will not -- I will tailor my  
21 cross so as to not go into the same areas.

22 CHAIRMAN BECHHOEFER: At least one area of my  
23 questions has already been covered collectively by one  
24 party or another.

25 MR. TURK: But, I think just keeping the

1 morning open for him would probably be the safest course  
2 and then coming back from lunch and starting with her.

3 CHAIRMAN BECHHOEFER: Right. And we would plan  
4 not to break for lunch until Dr. Copcutt is finished.

5 MR. TURK: Now in terms of contacting Ms. Long,  
6 I attempted to put a call through to her today and I found  
7 she was not in the office. I don't know if Ms. Carroll  
8 plans to contact her tonight.

9 MS. CARROLL: I could.

10 MR. TURK: Perhaps that would be appropriate --

11 MS. CARROLL: I could.

12 MR. TURK: -- to let her know the schedule.

13 MS. CARROLL: I think it would be more  
14 appropriate for you to call her because the staff makes her  
15 available. I think that would probably be tighter.

16 CHAIRMAN BECHHOEFER: She's your witness  
17 though.

18 MS. CARROLL: Okay. But she's our hostile  
19 witness.

20 CHAIRMAN BECHHOEFER: Yeah. But see, we're not  
21 allowed to issue subpoenas to staff members and that's  
22 why --

23 MS. CARROLL: That's right, but the staff can  
24 require her presence and therefore the staff should handle  
25 it.

1 CHAIRMAN BECHHOEFER: Well, we can require her  
2 presence. We're the one who is requiring it. We made the  
3 finding.

4 MS. CARROLL: Well as long as I can tell her  
5 I'm calling her on your behalf, I will call her.

6 CHAIRMAN BECHHOEFER: Well, you're calling her  
7 on your behalf but --

8 MS. CARROLL: But you made me. I mean, you  
9 gave me the authority.

10 MR. JOHNSON: She's still a hostile witness.

11 MR. TURK: I have no problem with doing it. I  
12 can simply contact her through the NRC operator.

13 MS. CARROLL: No, I'll do it.

14 CHAIRMAN BECHHOEFER: But let's say two o'clock  
15 or later. Two o'clock to be safe.

16 MS. CARROLL: Okay. And I'm making the call,  
17 is that right?

18 MR. TURK: (Nodding head affirmatively.)

19 MS. CARROLL: Are we still on the record?

20 CHAIRMAN BECHHOEFER: Yes. I'll guess that's  
21 all for today. We'll adjourn until nine o'clock tomorrow  
22 morning.

23 (Whereupon, the hearing was adjourned at 5:19  
24 p.m, to resume at 9:00 a.m., Tuesday, May 21, 1996.)  
25

C E R T I F I C A T E

This is to certify that the attached proceedings before the  
U. S. Nuclear Regulatory Commission in the matter of:

Name of Proceeding: Georgia Tech Research Reactor

Docket Number: 50-160-REN

Place of Proceeding: Atlanta, Georgia

Date: May 20, 1996

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.

*William L. Warren*

---

WILLIAM L. WARREN  
Official Reporter

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