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PRESIDENT'S COMMISSION ON THE  
ACCIDENT AT THREE MILE ISLAND

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CONTINUED DEPOSITION of METROPOLITAN  
EDISON COMPANY, by GARY PAUL MILLER, held at the Three  
Mile Island Nuclear Generating Station, Harrisburg,  
Pennsylvania, on the 8th day of August 1979, commencing  
at 8:15 a.m., before Robert Zerkin, Notary Public of  
the State of New York.

1900 140

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## 2 A P P E A R A N C E S :

3 METROPOLITAN EDISON COMPANY

4

5 SHAW, PITMAN, POTTS & TROWBRIDGE, ESQS.  
6 Attorneys for Metropolitan Edison Company  
7 1800 M Street, NW  
8 Washington, D.C. 20036

9 BY: ALAN R. YUSPEH, ESQ.  
10 of Counsel

9

10 PRESIDENT'S COMMISSION ON THREE MILE ISLAND:

11 JOAN GOLDFRANK, ESQ.  
12 Associate Chief Counsel

13 ALSO PRESENT:

14

15 RONALD EYTCHISON

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ooo

17

18 G A R Y P A U L M I L L E R , having  
19 been previously duly sworn, resumed the stand  
20 and testified further as follows:

21 DIRECT EXAMINATION (Continued)

22 BY MS. GOLDFRANK:

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23 Q Let me note for the record that we are  
24 continuing this deposition of Gary Paul Miller.

25 A I have some clarification. I have not done any



1  
2 homework or gone and looked at any documentation, but  
3 I have just talked.

4 We talked about policy yesterday, and I guess  
5 I got to thinking about that. Policy is basically  
6 determined for a nuclear station through the admini-  
7 strative procedures I don't have the ability to  
8 establish safety policies -- external to that, is what  
9 I was trying to say. I would have generated policy  
10 through memos which would have been put in a writer's  
11 file. From the standpoint of company policy, and from  
12 everything from safety evaluations, budget, is all  
13 determined within the company. The company has poli-  
14 cies in the procedures manual, and Generation has a  
15 generation procedure, which is a volume of stuff that  
16 I think really determines policy.

17 Other than that, guidance would have come out  
18 of memos for the most part. 1900 142

19 The second thing we talked about was my license.  
20 The decision for me not to keep my license, I believe,  
21 was a company decision. I did not object to that  
22 decision. Initially I wanted to keep my license, but  
23 I didn't judge that I could do it because I would have  
24 to have gotten rid of some functions. If you went  
25 back, like I said, and looked at the hours in 1976,

2 I think you would find it ran at least 15 hours a  
3 day, and probably averaged a 12-hour, 7-day week. I  
4 don't think I could have practically kept the license,  
5 so in my mind, the company made the decision for me  
6 not to keep my license. The one thing that did not  
7 affect me, I was never given a bonus for a license,  
8 but that would not have affected me in getting the  
9 license.

10 The third thing we talked about was document  
11 routing in Unit 1. When they established -- we  
12 talked about some various documents, and you had one  
13 out here. When they established a path for these, I  
14 was in GPU. When I came across to Met Ed, that was  
15 all established. When I started in Unit 2, Unit 2  
16 was not an operating plant. I did not even worry  
17 about operating reactors, current events bulletins.  
18 You know, my direction at that time was very, very  
19 slowly to get into the operating phases and prepare  
20 for operation, so what I did eventually do was we  
21 eventually ended up discussing communications with  
22 the Commission and the ACRS to a pretty great extent.

23 The first challenge with communications was  
24 between the units, just getting the units to talk to  
25 each other. Even though they were on a common site,

2 they were different enough and had different people,  
3 that communications was actually a challenge to estab-  
4 lish, and to show people it was established was hard.

5 My technical analyst did not have technical  
6 accountability for those documents. He did have  
7 accountability to assure that they came in and that  
8 they got routed. The one you showed me yesterday  
9 was either Operating Experience or Current Events.  
10 I don't remember in 1977 ever seeing any of those.  
11 I know from historical data that in Unit 1 there was  
12 a guy that took care of them, and I think it was the  
13 technical analyst that worked for the Unit 1 super-  
14 intendent.

15 Other documents which required response or had  
16 more importance to us were the NRC circulars, bulletins  
17 and information notices, and I still continue to see  
18 those, in addition to the routing.

19 I think also I am trying to draw on my memory,  
20 and I kind of feel, I guess, bad. A lot of this  
21 occurred in 1974 and 1975, and if you looked at my  
22 man-hours in 1974-75, I have 8 man-years in that  
23 period, and that is no exaggeration, so we are talking  
24 about a lot of items that I went through in those  
25 four years which may have come out of a total of eight

1  
2 work-years, which is the only way to do that amount  
3 of work.

4 I have searched my B&W Users file. I am con-  
5 tinuing to search that file, and I am also looking at  
6 Jim O'Hanlon's, which used to be the Unit 1 superin-  
7 tendent's file, and I found what I think is the total  
8 package from that meeting, my package.

9 Q The November 1977 --

10 A This is my writing, and we can produce this  
11 for you. I don't want to lose this because this  
12 seems to get asked for.

13 The first day of the meeting, I took the detailed  
14 notes. I can figure that out because it says, "First  
15 day." Those are my notes.

16 I think what you will find is that on the  
17 second day, we talked about operating experience.  
18 The second day, when we got to the Davis-Besse problem,  
19 I started to, I was still taking some notes at that  
20 time. I will give you this. They had problems with  
21 core flood check valves, and there are a list of  
22 problems, big problems. They were in startup, but  
23 went through a very long list of problems, as I  
24 remember it. Then I have Jim O'Hanlon, who has the  
25 notes for the rest of it. He took over the detailed

1  
2 note-taking. I don't have his notes. I am looking  
3 for his files and looking for other files.

4 What would typically happen, when he came back  
5 to the site, he would issue a memo to the right people  
6 to take any action on any item we wanted to look at  
7 from that meeting. I don't believe there was any  
8 action taken relative to Davis-Besse's PORV. I don't  
9 believe we were told or understood, "we" being us or  
10 them, the significance of that item at that time.

11 We can make a copy of this, maybe, at noon. I  
12 will look for any other notes on that. They are my  
13 notes.

14 Q Do these files all deal with the B&W  
15 Users Group meeting?

16 A These are all the B&W Users files, both mine  
17 and Jim O'Hanlon's files -- Jim O'Hanlon's files  
18 would have gone to Jim's unit. I am not convinced  
19 that these are complete, though, all the way back. It  
20 is hard to tell.

21 MS. GOLDFRANK: May we be provided copies  
22 of these files?

23 MR. YUSPEH: Sure.

24 A You want all of those?

25 Q Yes.

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1

2

MS. GOLDFRANK: Off the record.

3

(Discussion held off the record.)

4

A The other thing we started to discuss was procedures.

6

In the shift of administrative personnel that occurred from 1974 to 1977, there were a couple of PORC chairmen that existed. I have talked to Mr. Bacillia this morning, and asked John Wilson or you to come up tomorrow morning at 7:30 in order to try to pin down the procedures. I happen to have, personally, stuff they haven't found. I kept a history procedure book in those days, and what I did was -- in other words, I got to put together a story, but I'd like to have some definition as to a little different scope other than just reproducing the stuff and handing it to you.

18

I have the original change procedure which was "B&W should prepare the following."

20

This is the contract, the change order, and that tells you the procedures that B&W had to prepare. There is Change Notice 1, Task 1, TMI 2. (Indicating.) That is the reactor coolant pumps, the OP, the emergency procedures, the alarm response, the pressurizer, on nuclear instrumentation, integrating control rod

25



2 drive -- basically what I told you yesterday, their  
3 system.

4 What I am saying is that I think we can put  
5 together a procedure story, but I don't want to miss  
6 the target you are looking for.

7 MS. GOLDFRANK: Off the record.

8 (Discussion held off the record.)

9 Q You have brought with you today a black  
10 looseleaf binder that is marked as "Unit 2 GPM Plant  
11 Procedures History." That is your own personal copy  
12 that you have brought from home, is that correct?

13 A Yes, it is my personal capturing of some of  
14 the history of the procedure preparation for Unit 2.

15 Q Can you identify generally what type of  
16 information is contained in there?

17 A Basically, what is contained in there, when I  
18 came to Met Ed in September of 1974, one of my first  
19 duties was to plan the issuance of the operating  
20 procedures, and "operating" means emergency and  
21 normal, abnormal, all the Met Ed procedures to run  
22 the plant for TMI 2. First it contains -- basically  
23 we laid out what steps it takes to issue a procedure,  
24 and that consists of somewhere between 7 and 10 steps,  
25 starting with the scope, going to the writer of the

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1  
2 procedure, the subcommittee, the PORC committee, and  
3 also set up for the final scope of the procedure to  
4 the NRC and the use of the procedure to support the  
5 system that it is applicable to as that system would  
6 have been turned over from startup to Met Ed.

7 In addition to that, within the book there are  
8 contained some documents that involve procedures that  
9 are specifically covered by NRC requirements. Basically  
10 Safety Guide 33 was in effect at that time; that  
11 established certain procedures. I believe you had  
12 to have a certain requirement, and my memory isn't  
13 good as far as the detail, but that was one of the  
14 governing documents for procedures.

15 In addition to that, I have in here my cor-  
16 respondence relative to the initial assignment for  
17 procedure preparation, and that meant principally  
18 Met Ed, B&W, and Burns & Roe.

19 And there are also contained in here some of  
20 the initial history on determination of that sequence  
21 of who wrote the procedure plus some of the original  
22 contract changes to make it contractually obligating  
23 on B&W to prepare some of these procedures.

24 There are other miscellaneous information, some  
25 old plant schedules, and some reference to the

2 preparation for refueling procedures for Unit 2.  
3 The reason I mention that special is that could have--  
4 those procedures were very close to Unit 1's, and  
5 therefore, Met Ed would have done those procedures  
6 in Unit 2.

7 I think it is interesting to note the schedule  
8 at that time was pretty optimistic. I believe Unit 2's  
9 commercial date was probably thought to be in 1977,  
10 so the procedure schedules in here would be rather  
11 ambitious.

12 MS. GOLDFRANK: Off the record.

13 (Discussion held off the record.)

14 MS. GOLDFRANK: I would like to mark  
15 as Miller Deposition Exhibit 111 the document  
16 entitled "Three Mile Island Nuclear Station,  
17 GPU Startup Problem Report, GPU No. 2490," and  
18 attached to that is a November 14, 1977  
19 memorandum to Gary Miller and Jim Seelinger  
20 from J. A. Brummer and Michael Ross.

21 (Above-described document herein  
22 marked Miller Deposition Exhibit 111 for  
23 identification, this date.)

24 Q Could you please look at this and read  
25 it to yourself.

1900 150

2 A Yes. Not all that stuff is clear, but I think  
3 I know what they are talking about.

4 Q On the second page of what we have marked  
5 as Miller Deposition Exhibit 111 is a memo to you and  
6 Mr. Seelinger, Michael Ross and Mr. Brummer, correct?

7 A Yes.

8 Q It concerns, as the top of the memo  
9 indicates, "Water in the instrument air lines at the  
10 condensate polisher control panel and regeneration  
11 skid resulting in a loss of feedwater condition in  
12 Unit 2 on October 19, 1977," correct?

13 A Yes.

14 Q Do you remember receiving this memorandum?

15 A Not in too much detail. I remember the  
16 problem more than I remember that memo.

17 Q Do you remember Mr. Ross discussing the  
18 problem with you?

19 A No.

20 Q What do you remember about the problem?

21 A I remember that the polishers -- I think that  
22 this is -- I can't see the drawing, but I think this  
23 is referring to the ability to get demineralized  
24 water in the instrument air system to the check  
25 valve; that valve that separates service air from

1  
2 instrument air. My only memory is that GPU didn't  
3 feel that we needed a change. Their opinion was  
4 that we should change the procedure.

5 I thought there was another piece of cor-  
6 respondence that went with this, but I could be wrong.  
7 I thought there was, instead of changing the system --  
8 ideally, you shouldn't get the water in the air if you  
9 don't back-pressure the vessels, I believe, and I  
10 thought there was another piece of correspondence  
11 somewhere that recommended changing procedure, and I  
12 think the procedure was changed.

13 Q Who would that other piece of correspondence  
14 have been from?

15 A It would seem that it would have to have been  
16 Ron Toole and Tom Hawkins, and this same group of  
17 people, and that being John Brummer, myself, or  
18 Seelinger.

19 Q Ron Toole was sending a memo to you?

20 A Or a piece of paper, another piece of paper  
21 that said to our people that he thought the procedure  
22 ought to be changed. I thought it was something else.

23 Q When you received a copy of a memo from  
24 Mike Ross, did you then forward it to Ron Toole?

25 A I would have probably forwarded this back to

2 Seelinger to see what he was doing. I don't remember,  
3 but if he was already discussing it with Toole or what  
4 was on that problem, then I wouldn't have gone to Toole  
5 unless Seelinger came back to me.

6 Q So either you or Mr. Seelinger would have  
7 forwarded it to Ron Toole?

8 A Either one would have acted on it. I don't know  
9 whether we forwarded it to Toole. I don't know if this  
10 was attached to it, the problem report.

11 Do you know whether these two go together? Did  
12 the problem report get submitted with the letter? That  
13 was normally what would happen, somebody would write  
14 this letter; a guy like Brummer would then put this,  
15 send it over to Toole and say, "Please resolve that."

16 Q In the files at Metropolitan Edison, they  
17 are together. I am trying to find out if in fact when  
18 Ron Toole wrote his notes on the GPU Startup Problem  
19 Report, whether or not he had Mr. Ross' memo.

20 A I think he did, but I can't specifically say.

21 Let me go back in my file for that, and if I  
22 have anything, I will give it to you tomorrow morning.

23 Q Fine.

24 A I think it is a long time ago, but I thought  
25 I remembered another piece of paper, and maybe it

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2 wasn't official or attached, but maybe it discussed a  
3 procedure change; in other words, a way of operating  
4 the system which would have been harder, but you could  
5 have avoided the possibility of putting water back  
6 into the instrument air system.

7 Q You think Ron Toole came back with a  
8 suggestion that there be a procedure change?

9 A Him or Tom Hawkins, who was an assistant. I  
10 also guess that those two pieces of paper go together,  
11 but I can't remember that they do.

12 Q Looking at Paragraph 2 under "Summary of  
13 Events" --

14 A Yes.

15 Q It indicates that the polisher was  
16 attempting to transfer resin, correct?

17 A Yes. The operator was attempting to transfer  
18 resin from the mix bed polisher No. 2 to the receiving  
19 tank on the regeneration skid, which would have been  
20 a separate skid.

21 Q On March 28, the auxiliary operator was  
22 attempting to transfer resin to Polisher No. 7, is  
23 that correct?

24 A Yes -- I don't know which polisher number, but  
25 the line he would have been transferring to would have



1  
2 been the same line, maybe a different one of his  
3 vessels, but the transfer line is one line, I believe.  
4 On March 28th, he had a known plug in the resin line,  
5 I believe, both on the shift before.

6 Q This second paragraph also indicates that  
7 "The auxiliary operator noted water running out of  
8 the air-operated recorders on the condensate polisher  
9 control panel," is that correct?

10 A Correct.

11 Q On March 28, it was also found that water  
12 was in the air-operated recorders, correct?

13 A To my knowledge, this -- let's go back a  
14 little bit. It is very hard to be specific about one  
15 problem in that in the year 1977 and thereafter, the  
16 procedure for this system which told you how to trans-  
17 fer resin and also told you what to do if the resin  
18 plugged up, that procedure was modified, I think, to  
19 preclude putting water on the system at a higher  
20 pressure than the air, but that would have to have  
21 been closely followed, and on the resin plug, I guess,  
22 there was the potential that you could get the two  
23 together and drive water back in the instrument air  
24 system.

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25 Secondly, on March 28th, I understand that at



2 the time of the trip, nobody saw any water running  
3 out of anything. My memory is when they called in  
4 the instrument people on March 28th, they called  
5 them in for the pressurizer level instrument, which  
6 they wanted them to look at to see if it was really  
7 off-scale high. Once they got done with that, which  
8 was pretty quick, they went down to the polisher skid,  
9 and one of the instrument foremen opened one of the  
10 drains and found water; that is my understanding of  
11 the way that it was concluded that there was water  
12 in the instrument air lines.

13 Q This second paragraph also indicates  
14 that "Shortly thereafter, the discharge valves on  
15 the condensate polishers closed, resulting in a total  
16 loss of feedwater condition."

17 On March 28th, all the discharge valves also  
18 closed, right?

19 A I believe so.

20 Q It indicates in the next sentence that  
21 the control room operator tried to open the con-  
22 densate polisher bypass valve, and on March 28th, the  
23 bypass valves were also attempted to be opened, is that  
24 correct?

25 A It is one valve, I think. It is one valve, and

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2 it is a gate valve. I don't believe it will move with  
3 too much pressure across it. I don't know the exact  
4 delta pressure that it will move under, but a gate  
5 valve, by its nature, don't take much pounds to build  
6 up force.

7 Q On March 28th, they could not open it?

8 A I don't believe they tried, but I don't believe  
9 they could if they would have tried. In Unit 1, that  
10 valve is an air-operated automatic valve; in Unit 2,  
11 that doesn't have that ability, design-wise.

12 Q In Unit 2, it is not an air-operated  
13 automatic valve and does not have --

14 A In Unit 2, the gate valve is manual and wouldn't  
15 open because of the force that would be required.

16 Q Was there ever any discussion at this  
17 point in time to have the bypass valve automatic in  
18 Unit 2, as it was in Unit 1?

19 A I believe there was discussion, but I would  
20 be hard-pressed for a number of specifics, and I  
21 believe we, Met Ed, would have liked an automatic  
22 valve, and I don't believe GPU thought it was required.

23 Q Do you remember discussing that with Ron  
24 Togle?

25 A Not specifically.

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2 Q Do you know of another incident which is  
3 not reflected in this memorandum by Mike Ross dated  
4 November 14, concerning an October 19, 1977 incident,  
5 similar to this, other than the March 28, 1979 incident?

6 A That is the closest incident to March 28th. There  
7 were other instances of at least partial loss of  
8 feedwater. I don't believe that there is any that as  
9 closely resembles this one that I remember.

10 Q But you do remember some that came close,  
11 if not exactly?

12 A Not really; not specifically. I know we had  
13 another loss of feed -- one feed pump might trip, and  
14 so forth, in power, but I don't remember any that  
15 are this closely similar.

16 Q Do you remember any that involved the  
17 condensate polishers?

18 A I believe I remember that when we operated --  
19 not specifically to the valves on the polishers closing--  
20 the condensate polisher system and the condensate system  
21 and feedwater system in Unit 2, when you got to high  
22 power, had to be very carefully watched because it was  
23 very much at near its operating point, and by that I  
24 mean, you had to watch the flow through each polisher.  
25 You had to watch the differential pressure across the

2 various points in the system. You can trip a pump and  
3 lose one pump fairly easily or overload a bed fairly  
4 easily, so it was a limiting item, plus the polishers  
5 themselves, in their chemistry operation, the fact  
6 that it took a whole day to regenerate one of them.  
7 Any chemical upset in the secondary system could cause  
8 you to take one off or two off, which would cause a  
9 power reduction, so it was a sensitive system from  
10 a strictly operator's viewpoint.

11 Operators like more margin than was there. With  
12 100 per cent power, any perturbation could very quickly  
13 reduce power, and I think all of us were aware of that.  
14 It was safe to operate, but I am saying that it didn't  
15 appear to have been the margin that Unit 1 had.

16 Unit 2 operates also with 10 per cent more power.

17 Q Other than the procedure change that you  
18 indicated either Ron Toole or Mike Hawkins recommended,  
19 was there any other?

20 A I can't remember exactly who recommended that,  
21 but I think there were changes made in the condensate  
22 polisher transfer procedure to help preclude that  
23 problem. I am not saying that they did preclude it,  
24 but the goal was to preclude it. It would have required  
25 the operator to follow that exactly, or he would not

2 he would not be able to accomplish that goal.

3 Q Other than that document concerning a  
4 recommendation for a procedure change, do you know  
5 if there are any other documents concerning this  
6 particular October 19, 1977 incident?

7 A I believe at one time, and I am going on my  
8 memory, that there is another piece of paper somewhere  
9 that does -- that refers to the procedure change, and  
10 to maybe a simple equipment change to separate the  
11 service air and the instrument air systems, in a situa-  
12 tion where the instrument air system went down in  
13 pressure, and that way you could come across. We,  
14 rather operationally, would rather have the system such  
15 as Unit 1's, which are separated with a valve that will  
16 open on a pressure loss, so you don't cause the loss  
17 of instrument air, because that system, the loss of  
18 instrument air is avoided, and a loss of it can cause  
19 severe transients.

20 MS. GOLDFRANK: I would like to request  
21 that we be provided with a copy of the document  
22 that would reflect a recommendation that there  
23 be a procedure change.

24 THE WITNESS: I think what you are looking  
25 for, somebody has to look at MPS 25, which is

1  
2 in the GPU test documentation. Also, there  
3 should be a GPU file on the condensate system  
4 or the condensate polisher system, and it should  
5 be contained in there, but I thought I remembered  
6 something else, and maybe I shouldn't say I think  
7 I remember.

8 (Continued on Page 174.)  
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1900 161

2 MS. GOLDFRANK: I would like to request  
3 that if there is any documentation with respect  
4 to a similar incident to those occurring on  
5 October 19, 1977 and March 28, 1979, that we  
6 be provided with documents concerning those  
7 incidents.

8 THE WITNESS: I will look at my personal  
9 files.

10 A Off the record?

11 Q Yes.

12 (Discussion off the record.)

13 Q In your attendance of B&W Users Group  
14 meetings, subsequent to the November 1977 meeting that  
15 you attended that discussed, as you described briefly,  
16 the September 24, 1977 incident at Davis-Besse, did  
17 that incident or the subject matter of that incident  
18 ever come up at a subsequent B&W Users Group meeting?

19 A No.

20 Q Do you know Mr. Dunn of B&W?

21 A I know Mr. Dunn, but not well. I know of him  
22 more than I know him, but I know him.

23 Q Can you read the memo by Mr. Dunn that we  
24 have had marked as Womack Deposition Exhibit 23, please.

25 A Yes.

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1

2

Q Have you ever seen this memo before?

3

A No.

4

Q Had you ever seen other memoranda prior

5

to March 28th that reflected the concerns expressed in

6

this Dunn memorandum?

7

A No.

8

Q Had you ever discussed the subject matter

9

in this memorandum with Mr. Dunn?

10

A No. In fact, in that same time frame, and I had

11

no discussions with Mr. Dunn, and I very seldom speak

12

with B&W Licensing; they communicated with our Licensing

13

more than myself. I don't believe there was ever

14

communication that I was aware of.

15

One of the things we had discovered from, I guess,

16

discussions with other units, internally you could either,

17

through that period in April, I think was when we had

18

the transient here, where we had a severe blowdown,

19

where we were more worried about the pressure going out

20

the bottom -- if you go back and look at our analysis

21

of the transients in power levels, the pressure could

22

go out the bottom.

23

We were worried about that more than anything else

24

on these severe transients.

25

Q Were you aware prior to March 28 of a similar

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1  
2 concern regarding pressurizer level high, expressed by  
3 a Mr. Michelson?

4 A No. In fairness, I have read the Michelson  
5 report since March 28th. I had never seen it before that.

6 Q Were you aware of memoranda written by  
7 either Mr. Novak or Mr. Creswell concerning the same  
8 issue?

9 A Not before March 28th. I believe at one of the  
10 hearings I have been at, someone presented a memo on  
11 loop seal on the pressurizer, and that was subsequent  
12 to March 28th, and that was an internal NRC memorandum,  
13 I believe.

14 Q Can you explain to me what the Commercial  
15 Operation Review Committee was?

16 A The GPU system, when it placed a unit in operation,  
17 being either fossil or nuclear, they had procedures that  
18 they followed, and that is -- the terminology, "Commercial  
19 Operation Review Committee," I may not be right, is  
20 defined in a GPU procedure.

21 When Unit 1 was placed on the line, we did a  
22 review similar, but there was not at that time a formal  
23 management policy.

24 As I remember it, sometime after Unit 1, the  
25 GPU system established a formal review system with

1  
2 criteria in it, and that was presented in 1978, in  
3 October, I believe -- I believe October 20 or 26, and  
4 at that time, myself and Ron Toole were the primary  
5 preparers of that document, which was presented to  
6 the Commercial Board.

7 Q Who would have made up this committee?  
8 Who would have been the members of that committee?

9 A Let me ask if we can go off the record.

10 Q Yes.

11 (Discussion off the record.)

12 Q Who would be the committee members?

13 A The committee members for the Commercial Review,  
14 vice-presidents of Generation for all the companies  
15 including Service Companies, and that would have been  
16 Ivan Finfrock, Ralph Conrad, Jack Herbein, and Bob  
17 Arnold, and I believe they were all in attendance plus  
18 they had other people who worked for them, basically,  
19 of a managerial level.

20 I can't remember all the names. Following this,  
21 there was other action which followed up and closed up,  
22 which I don't have here at the end of this thing, was  
23 Jack Bachofer, the driving force, had to follow up on  
24 the open items, which had to be considered which had to  
25 be resolved before we declared the unit commercial, and

1900 165

1  
2 they were closed or dispositioned prior to that, and  
3 I was involved with some of those items.

4 I was primarily the preparer of the agenda.

5 Q Looking at what has been marked as  
6 Finfrock Exhibit 2, which are the minutes of an October  
7 26, 1978 Commercial Operation Review Committee, is that  
8 correct?

9 A I believe this was the presentation book given  
10 out at the meeting, and this was the basis of the meeting.  
11 In other words, I would have gotten up my portion, which  
12 is in here.

13 There was, in addition to this, John Bachofer  
14 issued minutes of the meeting which probably said this  
15 was part of it, plus a list of open items.

16 Q The purpose of the meeting was that the  
17 GPU committee was to review the status of TMI 2 and  
18 determine whether or not it could become commercial,  
19 is that right?

20 A The purpose of it was to determine the unit's  
21 ability to go commercial from the standpoint of safe  
22 efficient economic operation, and also, I think it was  
23 to allow myself as the operating superintendent to state  
24 my thoughts or my view on the ability of the unit to  
25 operate in commercial status.

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The procedure itself defines various areas which must be reviewed, plus it allowed me to discuss areas I wanted to review.

Q Did you report to the subcommittee at any other time besides this October 1978 meeting?

A I reported at the meeting, and I was involved with John Bachofer when we closed or dispositioned some of the items after the meeting.

Q Did you have any other communication aside from this one meeting and addressing the closeout items after the meeting with the Commercial Operations Review Committee?

A I had communications with Jack Herbein, I believe, and Mr. Bachofer, who I think represented Mr. Arnold; that would have been the extent of it, and I kept informed on the status of the items.

Q It was necessary to receive the word from this Commercial Operations Review Committee as to whether or not Unit 2 could go commercial?

A I think those minutes described it in better language than I could, but it was necessary that the people on that committee agree that Unit 2 was capable of commercial operation.

Part of that would have been my statement that I

1  
2 felt it was read, and I don't remember exactly the  
3 open items prior to commercial, but there were a  
4 couple of open items, I think, which had to be  
5 resolved before we went commercial, by agreement.

6 MS. GOLDFRANK: Let me mark as Miller  
7 Deposition Exhibit 112, the Report of the Review  
8 Board for the Determination of Technical and  
9 Organizational Readiness for Placing Three Mile  
10 Island Unit 2 into commercial operation, dated  
11 October 26, 1978.

12 (The above-described document herein  
13 marked Miller Deposition Exhibit 112 for  
14 identification, as of this date.)

15 Q Would you please look at this and tell me  
16 whether or not those are the minutes we referred to?

17 A Yes, they are the minutes I referred to. They  
18 address the criteria, and in the document (indicating  
19 Finfrock Exhibit 2) they also address our statements  
20 relative -- this supplement, which was signed off  
21 right at the end of December.

22 Q The day before you went commercial, correct?

23 A Yes.

24 Q They signed off on December 29, 1978?

25 A Right.



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Q Could you indicate to me why these

3

particular individuals, which would be Mr. Arnold,

4

Mr. Hirst, Mr. Herbein, Mr. Wilson and yourself

5

signed off on this?

6

A At that date?

7

Q No, why those particular signatures signed

8

off. You were signing off on a determination of

9

technical and organizational readiness of TMI 2 for

10

commercial operation, is that correct?

11

A We were signing off, I believe, that the items

12

that were considered significant relative to the

13

unit's ability to operate commercially, its rating --

14

we were, I think, in my mind, signing off that that

15

was the status of those items.

16

For instance, reactor power limited to 98 percent,

17

because we had a known problem with major reactor coolant

18

flow. To my knowledge, we were signing off that the

19

unit was capable of operating at a rating in commercial

20

service safer.

21

Q Mr. Arnold was a member of the Commercial

22

Operations Review Committee, correct?

23

A Yes.

24

Q And Mr. Herbein was also a member of that

25

committee, correct?



1  
2 A Yes.

3 Q And was Mr. Hirst a member of that  
4 committee?

5 A I believe the committee agreed at the meeting  
6 in October that these could be the signators to this  
7 particular part of the finished committee report.

8 Q Who was Mr. Hirst?

9 A Mr. Hirst, I believe, was manager of projects  
10 at that time in GPU.

11 Q Did Mr. Bachofer report to him?

12 A I thought that Mr. Bachofer reported to  
13 Mr. Arnold. I could be wrong, but I thought  
14 Mr. Bachofer was the director of another area. I can't  
15 remember the exact title.

16 Q So Mr. Hirst would have been the manager of  
17 projects?

18 A Yes. I thought if you look in here, the sub-  
19 committee consisting of those gentlemen was appointed  
20 to review this information; that was part of the meeting,  
21 and that is where this got designated.

22 Q Who was Mr. Wilson?

23 A He was manager of Engineering for GPU Service  
24 Corporation.

25 Q Did you indicate to the Commercial Operations

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the record of the operations at Unit 2 from the time that Unit 2 received its license in February of 1978 through December of 1978?

A Off the record?

Q Yes.

(Discussion off the record.)

A As part of the agenda which presented, I believe, the operating experiences and the licensing, but I believe it was presented by Mr. Floyd, who would have presented the Operations statement, and Mr. Toole would have presented the test program which occurred during that same period.

I presented my own statement relative to the unit, and I also discussed items such as staffing and plans for the next couple of years, and in those kinds of areas, organization and that type of thing.

Q What position did Mr. Floyd hold at that time?

A Operations supervisor, Unit 2.

Q You indicated to him that he should present the record of the operating experience at Unit 2?

A That's right.

Q Do you remember what his presentation covered?

A Not specifically. I reviewed it at that time, and

1 it would be in here. It would be in the book here.

2 If you look at his area, which was operating experience --  
3 the commercial presentation, Operations Department.

4 Q You are referring to what we have already  
5 marked as Finfrock Deposition Exhibit 2, correct?

6 A Yes, and referring to that you could see that  
7 Mr. Floyd prepared an Operations Department summary.  
8 Many of these people presented a summary, and inside  
9 the book the readers could read the detail, which Jim  
10 did that day, presented a summary of events from the  
11 licensing on, as related to significant problems  
12 relating to licensing and the detailed events since  
13 the license, which would have been his judgment.

14 Q As a result of this meeting, certain action  
15 items were indicated?

16 A My memory is that there were certain action  
17 items on some specific areas indicated, and I thought  
18 all of this was contained within the minutes of the  
19 meeting.

20 Q Would that be what we have marked as  
21 Miller Deposition Exhibit 112?

22 A Yes.

23 Q Can you indicate to me in there where the  
24 action items would be?  
25

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1  
2 A Throughout the document you would find that.  
3 At the end of each section of the agenda you will  
4 find discussions as to open items and actions. So,  
5 for example, license permits and certificates. It  
6 describes who was responsible to follow through the  
7 completion of -- in other words, there might be a  
8 book of that with some open items separate from this,  
9 and it would say Mr. Troffer and Mr. Faulkner were  
10 going to follow that through.

11 Now, there is a summary in here at the end that  
12 I believe tries to capture the sections where there  
13 are evaluations with the responsibility and assignment.

14 Q When you signed the last document attached  
15 to Miller Deposition Exhibit 112, you were certifying  
16 that those items had been completed?

17 A I was certifying that those items were either  
18 completed or that they were on a -- that they were  
19 being resolved, which would mean that there was  
20 continuing action which could be performed while the  
21 unit was commercial.

22 For example, the reactor power couldn't be 100  
23 percent, but could only be 98 percent. I was aware  
24 that there was a commitment for continued action to  
25 resolve that problem to eventually allow the unit to go



1  
2 100 percent. That action did continue through those  
3 months, so I was convinced that the commitment had been  
4 made to allow the unit to operate at 98 percent power  
5 with continued action on the areas that needed action.

6 If you look at one of the items in here you will  
7 see that the condensate system, which you earlier asked  
8 me if I had any other memory, the ability of the  
9 condensate to remove sodium was very limited. This  
10 fact coupled with the strictly feedwater limitations  
11 may restrict plant operation.

12 What I was saying was that there were problems  
13 identified which we were aware of, that the condensate  
14 in the feedwater system was, from an operational  
15 standpoint, the system was near its operating limits,  
16 and that also was the result of changes in criteria  
17 since the design of the system, so it wasn't a case of  
18 the design being inadequate, but that we were making  
19 the system to operate beyond its -- the sodium limits  
20 might have been 100 parts per billion, and it went to  
21 5 parts per billion, making the system operate beyond  
22 its design capabilities.

23 So it is not strictly the inadequacy of the  
24 design, but the additional criteria on the other side  
25 of the system.

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Q Do you remember after the October 26, 1978 meeting of the Commercial Operations Review Board, any discussions that followed Mr. Floyd's presentation of the history of TMI 2 operations?

A I don't specifically remember.

Q Do you remember if any concerns were raised with respect to the amount of repairs that had been completed since Unit 2 received its license in February of 1978?

A By "amount of repairs" you mean the number of work items? -

Q Yes.

A I don't remember any extensive discussion that would have led me to conclude that there were more repairs in Unit 2 than we would have, I guess, expected in a startup of a large unit like this.

There were some identified major problems which we were convinced were being repaired. The biggest single example of that was the relief valve, which is a significant change, that the company had taken months to put in.

If you look through the minutes and discussion of the test program, I think the areas discussed there were the ones of concern. Again, there was an extended



1  
2 discussion of the operation of the condensate polishing  
3 and makeup systems. There was a lot of discussion  
4 relative to the condensate and feedwater systems at  
5 that meeting, and the polisher system and the ability  
6 to make water in Unit 2, which was a system designed  
7 by the same organization that designed the polishing  
8 system, Los Angeles Water Treatment.

9           Neither system worked to the level we wanted.  
10 There was a lot of discussion on that.

11           I don't remember any discussion on Unit 2 having  
12 an extensive number of items. There was some discussion  
13 relative to the number of items in Unit 2 in total  
14 that I remember. I think personally that we wrote  
15 down a lot more in Unit 2 than we ever did in Unit 1  
16 because we had the same people. We had a lot more  
17 formalized documentation, and we tended to want to  
18 write down anything that was open so that we could  
19 track it.

20           I thought there were a lot of items, but when we  
21 have discussed those items, out of a thousand quality  
22 control items you might find that a hundred of them  
23 were of a very minor nature or of a documentation  
24 nature that had not been closed.

25           So Unit 2 might have had 9,000 open items, and I

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was convinced that that was okay and that was not unacceptable because of the nature of the items.

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5

There was discussion of the large number of items and how to close those items and how to follow them.

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7

Q

There was, in your judgment, you did not feel that those items were of a significant nature and you felt that the large number did not indicate the kind of items?

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A

There was a presentation either at this meeting or at another meeting of those items, and by category, by generic category like ARC strikes, closeout documentation from construction.

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When you did that and they made a commitment to close out that items, that commitment and review of the items, if you look here, it says, "Preparation of review and deficiency with list of individuals. As of this date some 1200 deficient items remain outstanding of 10,000."

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That seemed to be good performance from their standpoint because they had required a lot of those items during the construction period for the relief valves.. Of these, 308 have been cleared by QC to sign off. That means over 300 of those 1200, that is a quarter

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2 of them, were strictly waiting for a signature. They  
3 were done.

4 200 of them were just about done, so almost half  
5 of them were almost done. In reality, only 250 to 300  
6 of those required physical work, and plans were made  
7 to complete this work, which means aggressively pursuing  
8 it during the green outage, which was one outage we had  
9 to have before we went commercial, to remove some  
10 screens from the high pressure turbine, a normal event  
11 in the program.

12 That was the basis for me saying that I had no  
13 problem with the unit going commercial, with that kind  
14 of commitment.

15 Q Were you comparing the history of operations  
16 at Unit 2 with the history of operations at Unit 1 in  
17 making that judgment?

18 A In my mind, I was. I was involved with the  
19 work lists in Unit 1 from the other side. I was the  
20 GPU man on the other side. I felt a number of real  
21 work items were comparable. I didn't check numbers,  
22 but I think the figure might have been lower in Unit 2.

23 I was maybe looking for the management commitment  
24 for the project to spend a dollar after they went  
25 commercial. I had that commitment.

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The other way I would have to do it with my people.

Q Could you explain that, please?

A Those items were generated during the construction of the system. In my mind they were, therefore, the project responsibility to close out.

If I closed them out, I would have had to use my manpower for those items, which were their responsibility. Therefore, I would have less maintenance of my own I could do.

It was strictly from a selfish plant superintendent standpoint.

Q But the items that had been generated prior to TMI 2 going commercial would have been the financial responsibility of GPU; is that what you are saying?

A There was a commitment to maintain a work force, namely the contractor who built the plant here for a time after commercial, to help finish those items out.

Therefore, that money would have come from somewhere, but it wouldn't have come out of my operating and maintenance budget.

Q At this October 26, 1978 meeting, was there any indication of a desire to have Unit 2 go commercial prior to the end of the year 1978?

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A The scheduled completion date which you have to come up with to plan was before the end of the year,

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I believe. There was no discussion or encouragement

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to declare the unit commercial in 1978 just to make

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1978. I believe that the company wanted to make 1978,

7

and I was aware of that.

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Q How were you aware of that?

9

A I was aware of it from the standpoint that we

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were running quite late as it was from the standpoint

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of the relief valve outage, where the company is taking

12

a lot of months.\_

13

I think in our mind, to me, commercial didn't

14

mean quite so much. I still had the ball as far as the

15

plant operation on December 28th, the same as I did

16

January 1st.

17

I think a lot of us might have quite honestly

18

believed it was an incentive to the company, but I

19

didn't understand what that would mean.

20

On rates, the PUC rate hearings -- I am aware of

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that kind of thing. I'm not unaware of it, but not to

22

the level of detail where I knew of the specific

23

financial incentive that the company would get.

24

Q Did anybody indicate to you, other than at

25

this meeting, the desire to have Unit 2 go commercial



1 prior to the end of 1978?

2 A I, in all honesty, had some discussions after  
3 the meeting and in November and December, probably  
4 principally with Herbein and some maybe with Bachofer.  
5 Those discussions were strictly with the objectivity  
6 of, "Please tell us if you have a problem with the  
7 unit going commercial."  
8

9 There was no pressure on me to have the unit go  
10 commercial. There was pressure on me to operate the  
11 unit in a responsible manner, you know. My operations  
12 crew was taking on the unit now and we were beginning  
13 to give our first run at being totally responsible in  
14 our test program.

15 So there was discussion, but not pressure.

16 (Brief recess was taken.)

17 THE WITNESS: May I go on? Going on my  
18 memory, which, as I said before, I can't guarantee,  
19 but there were other things that had to be done.

20 We had to plan the screen outage cutter,  
21 which was the last major outage, and there was  
22 discussion relative to when the screen outage  
23 should be, the length of it, the amount of work  
24 that would be done.

25 Implied in those discussions was the fact



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that the unit was scheduled to go commercial prior to the first of the year.

I was involved in discussion and I might have even been involved in one or two discussions with Mr. Dieckamp.

In those discussions, it was made clear to me through both Herbein and Dieckamp, and implied in there by Bob Arnold, that the unit did not have to go commercial prior to the first of the year. They were more interested in determining the schedule, so that it could be definitely pinpointed what had to be done to take the unit commercial.

So the objective of the conversation would have been for me to present where we were going along with the GPU people.

For example, right around Thanksgiving, we had a problem with oil in the secondary system. At that time, we again had to re-plan when the unit was going to go to power and when the unit would go commercial.

I did not have an input into when the unit went commercial from the standpoint I did not know other factors that surely I thought were involved -- rates, budget. At that time I only knew my end

1900 182

of it, which was in concert with Ron Toole mainly.

Ron Toole and I would have to agree to schedules and present those schedules to Jack Herbein and Bob Arnold, Jack being my boss and Bob Arnold, when you get far enough up the line, being Ron's boss.

From that aspect, we discussed commercial, from that meeting on, relative to our needs, ours being mine and Toole's being to complete the test program, and mine for taking it operational, and the two of us agreed to a work scope of that screen outage, which was at that time the biggest single planning device.

When we had the oil problem in the secondary system in November, that took considerable time to assure we had cleaned it up. At that time, I was involved with John Bachofer and GPU engineering to help evaluate that.

There was very little discussion in the end of November about the unit going commercial because we were not sure when we could come back on the line, relative to the oil in the secondary plant.

Those were the kinds of things that I remember

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2

at the end of the year.

3

Q Did Mr. Herbein and Mr. Dieckamp indicate

4

to you specifically that the unit did not have to go

5

commercial prior to the end of 1978?

6

A I can't honestly remember. It was indicated to

7

me that the unit had to go commercial in '78. I always

8

believed in my mind that the company wanted it to go

9

commercial in '78, and I would be less than honest if

10

I said otherwise.

11

But, I would have had no reservation about the

12

unit not going commercial, no matter what the cost.

13

Q You indicated that prior to going commercial,

14

that Unit 2 would have had a screen outage, correct?

15

A That was our terminology for that outage.

16

Q And you indicated that you had discussions

17

as to what the work scope with respect to that outage

18

would be, correct?

19

A Yes.

20

Q Would you explain to me -- is there not a

21

routine of certain items that would be done when you

22

would have a screen outage or can you select what is

23

done at that point in time and what isn't?

24

Can you explain that to me?

25

A Okay. I think there is written ~~there~~ <sup>1900</sup> <sup>184</sup> was at

2 least a preliminary written documentation between  
3 Ron Toole and myself relative to Herbein and Arnold,  
4 relative to the screen outage and the schedule; in  
5 other words, Ron Toole and I agreeing on the schedule.

6 Normally in our planning at Met Ed, we maintain  
7 what we call "no name outages," which captures the  
8 items that people think ought to be faced, and you  
9 prioritize them.

10 So some of those items are obviously "must do"  
11 items. Some of them can only be done when you are not  
12 at power and you are cooled down. These items, yes,  
13 you would do.

14 But when I say the scope of the outage, there was  
15 other items that I hoped to do. So it is a schedule  
16 challenge to do as much as you can.

17 First of all, you have a job controlling the job.  
18 In this case, the screens on the turbine was a big job.  
19 I wanted to get his commitment for as much work, but  
20 there was agreement to help do those work items. If  
21 you remember when we talked, that is when I said "scope  
22 of the outages," it comes down to hundreds of items  
23 that are on a sheet of paper and a schedule.

24 So when I say "scope," I mean agreement down to  
25 which valves will be worked and so forth. There are

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some jobs that have to be done.

3

Q So that depending upon the number of items

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what you decide should be done during that outage

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would reflect the length of time that the plant was

6

down, correct?

7

A That is right. And there would be discussion

8

between me and Ron Toole, who is the GPU test superintendent,

9

as to what we thought had to be done. I might want

10

different things.

11

(Discussion off the record.)

12

MS. GOLDFRANK: I would like to request that

13

we be provided with copies of correspondence

14

between Mr. Miller and Ron Toole and perhaps

15

Mr. Herbein and Mr. Bachofer, concerning the

16

screen outage that would occur on TMI Unit 2 in --

17

THE WITNESS: Late '78.

18

It might have been Mr. Arnold and not

19

Mr. Bachofer. It could have been either of

20

the two. Mr. Arnold or Herbein would really

21

have been talking. The other person I might

22

suggest would be Mr. Faulkner, who is Tom

23

Faulkner, who was the schedule guy and he is

24

here still.

25

Q Did anybody indicate to you in the period



1  
2 prior to Unit 2 going commercial as to the tax benefits  
3 that would be accrued if the unit went commercial  
4 prior to the end of 1978?

5 A I was aware there was a tax benefit, but not in  
6 any detail. I think there was an incentive to be  
7 on cycle '78, but I don't remember being told that or  
8 written that. I think I heard that more than I can  
9 say I was told that.

10 Q Do you remember who you heard it from?

11 A Not from management. I heard that from just the  
12 usual circuit that you have on the Island of rumors,  
13 like any other place.

14 Q You indicated that you had a discussion  
15 with Mr. Dieckamp during the late fall of '78.

16 A If I remember, we had one or two discussions. I  
17 knew him relative -- we had manager review meetings in  
18 addition to this kind of meeting. At times he  
19 participated personally in these meetings.

20 We had dedicated TMI Unit 2 in September of '78,  
21 and had Mr. O'Leary here from the government. During  
22 those times, I knew Dieckamp personally to some level  
23 and he called out of interest a couple of times to see  
24 how we were doing.

25 Those were the conversations. Also, we had a



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2 severe problem in the oil in the secondary systems.

3

Q And he called two or three times during  
4 that fall?

5

A In the late fall I think I called him once or  
6 twice, and Herbein probably a lot more and Arnold  
7 maybe not so much -- Arnold and Bachofer -- but that  
8 is hard to remember.

9

Q And he would call to find out the status  
10 of Unit 2?

11

A I think the one time he called that I can remember  
12 was the oil problem we had, which we have had in fossil  
13 units, the same problem or a similar one.

14

I think he called out of interest to how severe  
15 was that.

16

Q And was that the purpose of his call the  
17 other time?

18

A I don't specifically remember.

19

Q How much contact have you had with  
20 Mr. Dieckamp since the unit has gone commercial?

21

A Periodically I have had contact with him, both  
22 before and after. Once or twice a month.

23

There are times when I may inadvertantly see him  
24 on the Island or at a meeting.

25

Reporting directly to Jack, which is probably at

1

2 some level his decision really, I believe, was I think  
3 his policy of staying current on problems in nuclear  
4 and the people within the nuclear facility.

5 He took an interest in that before any of this.

6 Q So that you think the decision that you  
7 should report to Mr. Herbein, as opposed to reporting  
8 to Mr. Lawyer, was a decision of Mr. Dieckamp?

9 A I think he was involved somewhere in that decision  
10 process. I don't know that he would be the initiator,  
11 but I think one of his concerns was to stay close from  
12 a senior management standpoint.

13 Q And what was your contact with Mr. Creitz  
14 prior to the unit becoming commercial?

15 A About the same frequency, not as much plant-type  
16 and specific though in that Mr. Creitz participated at  
17 some -- mainly I guess I can remember some tours we  
18 gave to some mainly officials.

19 At those times, I always got to talk to him.

20 Q Was that usually the only time you would  
21 have contact with Mr. Creitz?

22 A Basically to the best of my memory, yes.

23 Q Since the unit has become commercial, has  
24 your relationship with Mr. Creitz changed at all in  
25 terms of the kind of contact or the frequency of it?

2 A No, it hasn't changed.

3 Q You had more frequent contact with  
4 Mr. Dieckamp than with Mr. Creitz?

5 A I would say about the same, probably with relation  
6 to different matters. I can't remember Creitz participa-  
7 ting in the management reviews, although he may have.  
8 In fact, I think he did, so it would have been about  
9 the same because it is the presidents of all the  
10 companies that come to that.

11 Q That is the Nuclear Management Review  
12 Committee?

13 A Yes, that is the senior group that comes in here  
14 about twice a year, at least once a year, since we went  
15 commercial, and that is what I am saying, when you make  
16 contact at that meeting with all the presidents,  
17 Dieckamp stands out that he is the senior one.

18 Q What is the purpose of that meeting?

19 A I think the purpose of that meeting is detailed in  
20 the document that promulgates it, which I think is a  
21 Dieckamp memo.

22 The basic purpose is to have senior management  
23 company officers have awareness of the nuclear plant  
24 items and problems and with the people.

25 Q Did that meeting run at Three Mile Island?

2 A It is run at Three Mile Island and Oyster Creek.

3 Q Alternating?

4 A I think they are on a schedule where they get to  
5 every unit once a year. The Unit 2 was not a commercial  
6 unit, and I believe there was a meeting in Unit 2  
7 prior to March 28th.

8 Q And is it run similar to a GORB meeting in  
9 that the Island personnel would be asked to give a  
10 presentation as to certain issues?

11 A Yes. Also, I think the agenda, I think Herman's  
12 memo stipulates some areas and these open some areas.

13 Another plant would be allowed to present what  
14 they want to. The meeting was a very frank and open  
15 meeting.

16 Q Looking at what we have already marked as  
17 Miller Deposition Exhibit 112, do you know why the date  
18 that the last attachment that you, along with  
19 Mr. Arnold and Mr. Hirst and Mr. Herbein and Mr. Wilson  
20 signed, concerning meeting certain criteria that had  
21 been set down by the Commercial Operation Review Committee  
22 do you know why that date was December 29, 1978?

23 A No, it says per telecon. I believe prior to the  
24 telephone call I had seen this in writing. I think I  
25 was in my parents' home on the 29th. That is the reason

2 for the telephone. But I had seen it prior to that.

3 I think -- I guess -- I thought that these  
4 items had to be agreed to by the subcommittee prior to  
5 going commercial.

6 Q Do you know why it was on the 29th, as  
7 opposed to the 30th or the 28th?

8 A I don't know why it had to be the 28th or 29th.  
9 I believe that the basic written document though,  
10 existed before that date. I believe getting it  
11 circulated to all parties -- I think it existed in that  
12 week of Christmas. The basics of this existed in  
13 writing.

14 I think I remember looking at it, and I think what  
15 we were really trying to do was to get to all the  
16 members and discuss it. I think it was coincidental.  
17 I don't know that it had any direct relation to the  
18 unit going commercial because I wouldn't have made that  
19 decision.

20 I didn't even know they were declaring the unit  
21 commercial until I came back after the 1st of the year.

22 Q But this particular document had to have  
23 been signed prior to declaring Unit 2 commercial,  
24 correct?

25 A I think the completion of the review had to be done,



2 and I think we had to have those signatures to do that.  
3 There were some items that you couldn't discuss on the  
4 October 26th meeting.

5 For instance, we didn't know what problems we  
6 might have with 98 percent power. That was in the  
7 future. I think it was in the final set of items,  
8 both anything from the meeting and anything that  
9 developed since the meeting. You couldn't have agreed  
10 it was ready to go commercial while you were at low  
11 power or you would have agreed to something ahead  
12 of time from a technical standpoint.

13 Q So you indicated you were probably at your  
14 parents' house?

15 A I think I was at my parents' house over that time  
16 frame.

17 Q And you saw this document and read this  
18 document prior to this?

19 A I am sure I saw these words the week of Christmas  
20 when I was still here, and when they called me on the  
21 phone -- I think I even had a preliminary copy.

22 Q Do you know if any changes were made from  
23 the preliminary copy that you had to this final copy?

24 A I think I commented on the preliminary version of  
25 this to John Bachofer. I would be hard-pressed to tell



2 you specifically what comments I made. I am sure that  
3 I had something to say about the flow problem, which  
4 meant we couldn't get to a hundred percent.

5 I think I also had some discussion on the turbine  
6 limits with the Westinghouse people. I think I was  
7 partly responsible for incorporation of the comments  
8 on again re-emphasizing the problems with the polisher  
9 system and with the heater drain pumps, which were a  
10 problem that developed and showed itself to be more of  
11 a problem after the meeting.

12 I know I commented on it, and I know my comments  
13 were incorporated.

14 (Continued on following page.)

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1900 194

SR 4 1c

1  
2 Q Would you have commented to Mr. Bachofer  
3 in writing?

4 A Probably by phone because of the logistics.  
5 He was in Mountain Lakes.

6 I will go back, if you want me to, and look and  
7 see if I have anything.

8 Q If you would look and see if you have any  
9 notes of the phone conversation.

10 A I would have talked to Bachofer by phone because--

11 Q If there is notes of that phone conversation  
12 or a memo concerning that phone conversation, we would  
13 appreciate your providing us with a copy.

14 A Yes.

15 (There was discussion off the record.)

16 Q When you spoke with Mr. Arnold on the phone  
17 concerning your signature on the document that is  
18 attached to Exhibit 112, did he indicate to you when  
19 Unit 2 would be declared commercial?

20 A I don't remember any conversation with Bob Arnold  
21 on that date. I think I remember these words being  
22 read to me, word for word, on the phone. To my  
23 knowledge, we didn't discuss "commercial," and in fact  
24 I didn't know we declared the unit commercial until I  
25 got back.

1900 195

1  
2 I don't remember, but that was after the first  
3 of the year, I believe. I don't remember the exact  
4 date, but I didn't know it until afterwards.

5 Q Looking at what we have previously marked  
6 as Finfrock Exhibit 11, which concerns a Nuclear Plant  
7 Management Review, dated January 18, 1979, are you  
8 familiar with that document?

9 A Yes.

10 Q Is that the result of a meeting concerning  
11 the Nuclear Plant Management Review Board meeting?

12 A Scheduled for Unit 2. It would have been the  
13 initial meeting. What you see here is the book that  
14 I presented to the board when they came here.

15 In other words, basically most of this was  
16 prepared by TMI staff. This is my preface. (Indicating.)  
17 An agenda was issued by me. The introduction was  
18 written by me. The memo I talked about relative to  
19 who was on the board is in here. That is one of the  
20 things I did was to put it in here so you would know  
21 what the purpose is. It included the agenda we  
22 talked about previously and the scheduling for nuclear  
23 units within our system.

24 My presentation was strictly my own choosing at  
25 this particular meeting, plus I had the agenda structured

2 so that I covered the areas in Mr. DeCamp's memo.  
3 Basically this is the document that I had responsi-  
4 bility for preparation of.

5 Q Looking at Page 5 of that exhibit, it  
6 begins with a discussion of personnel retention and  
7 hiring, correct?

8 A That is my presentation.

9 Q In "I" the first sentence states, "A dollars  
10 crisis is or has developed," correct?

11 A Yes.

12 Q Could you explain what you meant by that?

13 A At the time I prepared this, my knowledge was  
14 that we were in a budgetary status where we were  
15 trying to cut the budget to, I can't remember the  
16 exact level, but to the minimum we needed to operate.

17 It offered a challenge to remain effective while  
18 making significant expenditures for reduction. We  
19 would have to be careful where we cut the dollars.  
20 That is my opinion, by the way, not the company's.

21 Q Whose decision was it that there would be  
22 budget cuts? Is that a Met Ed decision or a GPU  
23 decision?

24 A It came to me from Jack Herbein. It could have  
25 been -- it was probably a GPU decision, but I would

1 not have had anybody from GPU tell me to cut my budget.

2 Herbein was in charge of the generation budget.

3 Creitz was probably in charge of the Met Ed budget.

4 I got my input from Herbein as far as what level.

5 He would ask me to show him budget reductions. That

6 would be the way that would go. He would not tell

7 me where to go.

8 He would ask me to propose, and propose the impact

9 of them, and I would do that at the managers' meetings

10 we talked about yesterday. I would also discuss the

11 impact and also discuss which changes and which levels

12 I could not cut through.

13 Q He would indicate to you how much your

14 budget should be cut but not particular areas where

15 you should make the cuts?

16 A I think he would ask me for levels like 5, 10,

17 15 per cent levels, where I would make levels for 5

18 per cent or 10 per cent or 15 per cent levels, and what

19 the impact is. That was typically the way we did

20 business.

21 "You give me a 5, 10," and I could be wrong on

22 the numbers, but probably 5, 10 and 15, or maybe 5,

23 10 and 25 per cent cuts, "and you tell me where you

24 would make them and tell me the impact of that."



1  
2 Q And was this done in 1978?

3 A This was occurring separate of this meeting,  
4 but it was occurring in the process. In other words,  
5 in the company process, there were discussions of  
6 budget cuts occurring.

7 Q And that would have been for the budget  
8 for 1979?

9 A It would have been for both. I believe at  
10 that time we were discussing 1980 and 1981, maybe  
11 even further, but at least there were programs we were  
12 trying to get into for 1980, carrying over to 1981.

13 There is other meetings with significant docu-  
14 mentation on budgets. My statement was strictly that  
15 cutting dollars was going to be hard.

16 Q And had Mr. Herbein indicated to you a  
17 desire to have you cut the budget for 1978-79?

18 A I believe we went through -- you see, Unit 2  
19 budget was not affected in those years. My Unit 2  
20 budget came out of GPUSC construction budget in the  
21 years prior to commercial. I would have had very  
22 little problem obtaining funds I needed for that.

23 But they were minor funds compared to the total  
24 dollar expenditure occurring in Unit 2 at that time.

25 I might have \$12 million out of \$100 million,

1  
2 as opposed to all of them. By now there were budget  
3 reductions occurring in Unit 1 in that period, and  
4 there were budget meetings on Unit 1 that I was in-  
5 volved with it. I think some of it traces back to  
6 the PUC rate relief.

7 I remember discussions in '77 or '78, maybe  
8 both, relative to the rate relief that we were asking  
9 for and its effect on my operating budget.

10 There were, therefore, discussions of budgetary  
11 control. One of our biggest challenges in this utility  
12 was to be able to clearly document our budget expendi-  
13 tures, our budget and our tracking system, because the  
14 PUC, I think, wanted it, and we were going through  
15 an awful lot of homework and expansion even in the  
16 budget area.

17 I believe in Met Ed they brought in Mr. Wise  
18 from GPU, and I and two or three people, totally budget  
19 people, by the end of 1978.

20 So there were budget discussions occurring, and  
21 they were hard discussions.

22 Q Was there a desire to have a 5 or 10 per  
23 cent cut in the budget for Unit 1 in 1978 or '77?

24 A I think Unit 1 ran in 1977 with an operating  
25 budget that was very low because we had a very good

2 year. I think we ran like a \$13.2 million or \$13.3  
3 million budget year, and felt, on-site, we needed  
4 somewhere between \$15 million and \$16 million a year  
5 to operate.

6 When I am talking budget, I am not talking  
7 building items. Building items are capital items.  
8 I am talking about operating and maintenance budget.

9 I think that was creating some pressure on me to  
10 get closer to that, and I felt that was not a typical  
11 year. That is the kind of discussion I had. ~~longer in this~~

12 I am sure that I provided budgetary presentations  
13 at meetings in Reading for the cuts. I'm sure that I  
14 said that some of the cuts were too harsh. I'm sure  
15 that was on my mind when I wrote that statement.

16 Q Your II on Page 5 of Finfrock Exhibit 11  
17 indicates, "The great expansion has ended. The future  
18 may hold the possibility of personnel cuts through  
19 efficient or other methods." What was the basis of  
20 that statement?

21 A Part of the pressure that was occurring was not  
22 to increase the staff. There was, in fact, pressure  
23 to decrease the staff. There were people with the  
24 opinion that the staff here was bigger than the  
25 staff at comparable units elsewhere, and I did not

1  
2 agree to that.

3 When I say, "The great expansion has ended," I  
4 think in fairness to myself, some of what you are  
5 reading was kind of an emotional presentation.

6 Unit 1 and Unit 2 took a lot of man-years out  
7 of some of us, and I didn't see how I could reduce the  
8 staff and adequately operate, certainly not in some of  
9 the areas like Operations.

10 In fact, I wanted an increase in Maintenance.

11 By "The great expansion has ended," I meant I  
12 could add people-easier in the preparation stage than  
13 I could afterwards. When I said that, I said that  
14 I wanted expansion, and yet the future may hold  
15 personnel cuts. In other words, I might not be able  
16 to add a job. I was having a hard time adding people  
17 to the staff. It was taking me a long time to get a  
18 job replaced for a guy that got promoted and left.  
19 That is what was the context of that statement.

20 Q Did you indicate to management that you  
21 wanted to increase the maintenance staff?

22 A I indicated that I wanted to increase the  
23 staff in other correspondence, and Maintenance is  
24 the biggest single area I could come up with, because  
25 I felt that Operations -- Operations, I felt, was

1  
2       staffed to be operated at a six-shift two-unit basis.

3               I felt we needed to mature in Operations, and I  
4       think I said that. Maintenance needed more people.

5               The other thing that I think was occurring was  
6       we were trying to reduce the contractors because of  
7       the great expense of contractors that has been men-  
8       tioned in the PUC and public standpoint. That was  
9       the context of that.

10              Q       What was the response to your desire to  
11       increase the maintenance staff?

12              A       The concept had received favorable response.  
13       The paper to add the people was taking an excessive  
14       time, in my estimation.

15              Q       Had you, by March 28th, been able to hire  
16       the additional maintenance staff that you needed?

17              A       No.

18              Q       But you had a commitment from management  
19       that you could?

20              A       I had a commitment from Herbein that he  
21       agreed with the concept of what we felt, as far as  
22       the need to have people in maintenance, and especially  
23       in shift maintenance.

24              The way our union contract is structured,  
25       without shift maintenance, it is very awkward getting



1  
2 people in, and it is very expensive.

3 Jack had agreed with the concept. From my stand-  
4 point as the plant superintendent or manager, I  
5 felt that the paper and the justification were becoming  
6 too excessive. It was making it slow.

7 I am not sure they could have made it fast  
8 enough for me, but I felt it was too slow.

9 Q Who would that paper go to?

10 A It would go between basically me, Personnel and  
11 Herbein and eventually, probably, to Walter Creitz.

12 Q It would have been between you and --

13 A My department heads would have had to make up  
14 the proper forms and justifications. Jack had a  
15 manager of Administration, Paul Christman, who I  
16 think did his front end work, and Mr. Leiby, who did  
17 his personnel work. Between those two, they would get  
18 it to Jack.

19 I think it was Jack's responsibility and Kreitz'  
20 to sign. That was taking a long time, and it was a  
21 painful process in that it took rewrites and more  
22 justification.

23 Q Your II on Page 5 indicates in the  
24 second sentence that the future may hold the possi-  
25 bility of personnel cuts. What is that based on?

2 A There were discussions. I think there were  
3 discussions -- I can't totally remember -- I think  
4 there were discussions that we might have to maintain  
5 a staff level on the site of a lower number than I  
6 had the first of the year.

7 There were discussions that I might have to go  
8 down 20 people, something of that nature. That is  
9 what I remember. That is where that is coming from.

10 Q And did that happen?

11 A I don't believe it ever happened. I don't  
12 believe I was ever staffed either, though. I think  
13 I was always running 20 to 30 people short.

14 Q In other words, when you referred to the  
15 possibility of personnel cuts, you were notified that  
16 you would have to be 20 people below what you could  
17 possibly staff?

18 A What I thought I could staff. Okay, there was  
19 discussion in the company about personnel levels, and  
20 I believe that discussion really originated in GPU  
21 somewhere.

22 I think that discussion specifically said how  
23 many people you are allowed to have in generation.  
24 I guess I was concerned that the number that they  
25 might approve or give to me would be lower than the

1  
2 number I needed. That was the context that was  
3 written in.

4 But it wouldn't have been given to me as a  
5 specific. I have 414 people reporting to me, and  
6 it would have been, "You must maintain a 394 level,"  
7 something of that nature.

8 Q Was that indicated to you?

9 A There were numbers indicated to me, but I was  
10 never stopped from adding a position where I wanted.

11 So I was worried that the next step in that  
12 process, I was worried now now that the company  
13 necessarily intended the next step might be that I  
14 could not fill some jobs. I was very concerned about  
15 where those jobs would be, but I had not been stopped  
16 from filling jobs, although I did have a laborious  
17 process.

18 Q The number of your personnel level that  
19 was committed to you, who gave you that level?

20 A I think that we must in the context of the  
21 discussion remember we had a hard time agreeing on  
22 the number that were on the Island. The confusion  
23 there, I guess, resulted from the different number  
24 of people who count the number of people.

25 Personnel has a count. Payroll has a count.

1  
2 Budget has a count. Then we all had our own counts,  
3 "we" being me and Herbein.

4 Everybody on the Island reported to me. I had  
5 people like Stores people, Quality Control, Training,  
6 that did not report to me. Therefore, when it came  
7 time for budget or personnel, they were counted against  
8 TMI. So the discussion that was occurring was I was  
9 trying to separate out and make very clear to people  
10 what the Operations and Maintenance, as I called them,  
11 "the line support," was.

12 I was saying at that time that I could not accept  
13 cuts in any of those departments, and those departments  
14 would have been Health Physics and Chemistry, where I  
15 thought I needed addition, and Maintenance, where I  
16 needed some addition, and Operations, which I didn't  
17 think should be decreased, and engineers on-site,  
18 which I thought needed an increase.

19 In fact, in this presentation I asked for about  
20 20 engineers, not that I needed 20, but I asked for  
21 them from an attrition and long-term standpoint.

22 Q You indicated that earlier you had dis-  
23 cussed with Mr. Herbein the increase in Maintenance  
24 personnel, and that he had made a commitment to that,  
25 correct?

1900 207

2 A He had approved the concept. We were talking  
3 about numbers. What I was trying to say was that  
4 agreement on numbers was actually hard, but it was  
5 only part because one number would be 10 or 15 out of  
6 500. The levels that would have come down from senior  
7 management of GPU would have been levels for generation.

8 My concept would be that Jack's number would be  
9 1200 people in generation. I am saying, then, that  
10 you would come down from this to an allocation which  
11 would involve fossil units and nuclear units and  
12 engineering.

13 I am saying I did not want my piece of the pie  
14 changed by my management. I didn't have input into  
15 the big number.

16 Q So GPU, meaning Arnold and DeCamp, would  
17 set a number for personnel in unit generation?

18 A I believe that is where it came from, although  
19 I was not party to any of that.

20 Q And then Mr. Herbein would indicate to you  
21 what your slice of that pie was?

22 A He would ask the managers, of which I was one,  
23 to present our slice of the pie. Then we would try  
24 and fight out the number between us. That could  
25 become a conflict.

1900 208



2           When I made the statement you referred to, I was  
3 worried that my piece of the pie would be made smaller.

4           Q       Had Mr. Herbein indicated to you that it  
5 would be made smaller?

6           A       There was indications of a possibility, and I  
7 guess I wanted strong input into what areas that would  
8 occur in.

9           Q       But even after he indicated that to you,  
10 he did agree that you could have an increase in the  
11 Maintenance personnel?

12          A       Yes. Dan Shovlin, who was Maintenance super-  
13 intendent, I think had demonstrated to Jack the need  
14 for Maintenance additions, especially in the shift  
15 maintenance area.

16               We also discussed the need for contract changes  
17 to make it more palatable to do the work in a 24-hour-  
18 a-day operation.

19          Q       Looking at Finfrock Exhibit 11, on Page 5,  
20 you, in VI, indicate, "Communication and understanding  
21 of our management goals, objectives and actions taken  
22 to achieve them is not understood adequately internally  
23 or externally."

24               Could you explain the basis for that statement.

25          A       I didn't personally feel that generation and

2 the other, as I call it, the other parts of our company  
3 which were under the other operating officers in Met  
4 Ed communicated very well. I never thought that the  
5 Personnel gave personnel support. I never thought  
6 Accounting gave accounting support. I never felt that  
7 they had the same accountability and pressure that I  
8 did, that I felt or that my people felt.

9 I also, I guess, subjectively thought they  
10 weren't feeling the same budget/personnel crunch to  
11 the level I was.

12 But that is my own opinion. I do not sit in  
13 their house. My opinion was that I wasn't convinced  
14 that our company as a broad spectrum communicated  
15 very well.

16 I include Safety and Budget and Personnel and  
17 personnel policies. I guess Personnel would be really  
18 one that was in my mind more than anything else, and  
19 given my experiences.

20 Q What was the Nuclear Management Plant  
21 Review Committee's response to your comments?

22 A I don't believe they disagreed with me, but I  
23 don't believe they talked about it.

24 I think, quite frankly, that when I said to you  
25 earlier there was an open and frank forum, I went into

2 it and I presented -- if you read this piece of paper,  
3 you realize that I presented it to the company president.  
4 I felt that it was a right time to discuss communi-  
5 cations and management goals, and that they accepted  
6 my presentation, and there was some discussion of  
7 some action. ~~They had the same accountability and pressure to~~

8 But I don't believe on that item there was.

9 My basic thrust in this presentation is there was  
10 personnel. My basic thrust was personnel retention  
11 and hiring.

12 Q Looking at Page 7 of this exhibit, you  
13 indicate in No. VI that you were concerned with  
14 personnel losses, correct?

15 A Yes.

16 Q And you indicate that "I consider some of  
17 the above could have been retained, and all were  
18 senior enough to represent a loss of production to  
19 the company."

20 Why did you feel that these people could have  
21 been retained?

22 A I think some of them left because of our poor  
23 personnel policies. That was my opinion and still is.

24

25

T-5

Miller

SR/mf - 1

Q What specifically?

A Some of the stuff that I mentioned above there. I mentioned a lot of items. I talked about previous letters. I talked about Bonus Programs. I talked about Compensation Programs, those types of things. ~~SOME ACTION~~ Some of those people were involved with having people work for them, and they were therefore limited by some of those practices which I just considered to be needing a better look.

When you were dealing with the kind of people I think we were dealing with, I thought people like I mentioned there -- Max Nelson was the key guy in the Test Program. He was here through both units. He knew the Test Program and the NRC requirements and our requirements off the top of his head.

I think we lost him because of our inability to find him a job in the system that could have used him. That was my opinion.

Jim O'Hanlon left here and became manager at Arkansas. Some of these people could have gotten better jobs, so you're going to lose good people, but I thought some of these people should have been kept here. That was my opinion.

BENJAMIN REPORTING SERVICE

1999 212



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Miller

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Q Didn't you discuss that with them

3

prior to leaving?

4

A Yes.

5

Q And they indicated those concerns to

6

you?

7

A Yes. I was involved with most of the things involved

8

I mentioned. The ones I put down here were people

9

I knew very well. Most of those people were of

10

a senior nature. Therefore, they would have had

11

some of the same problems supporting their people

12

who worked for them as I did.

13

So that except for Mr. McMillan, who

14

was a young engineer and spent two or three years

15

here and went to work for a vendor, and I probably

16

could have found work for him -- it is my opinion

17

we didn't do enough.

18

Q You indicated earlier that one of the

19

things you articulated at this meeting was the

20

desire to have, I believe, 20 engineers on-site.

21

Number 8 on page 7 indicates one of

22

your concerns was that there was a very limited

23

number of Engineer I's?

24

A Junior engineer. Engineer I would be the

25

entry level degree engineer hard out of college



3

1

Miller

2

with a four-year degree. I don't think there are any, not even one.

3

4

Q What was the response by management to that concern?

5

6

A They agreed with me.

7

Q And did you get a commitment to hire? the th

8

A I got a commitment to the concept.

9

Q And was it put into practice?

10

A No.

11

Q Why not?

12

A When I say "no," I don't believe I was allowed any increased staff. There was, I believe, discussion that I wasn't involved with between Herbein and Arnold about that possibility of adding people to the GPU payroll and bringing them in here.

16

17

There were, in fact, four engineers brought here that were slated for Forked River and Jersey Central. So there was some response.

19

20

The response, to be honest, wasn't to my satisfaction, but there was discussion ongoing even at the time of this incident, about adding engineers. Once there was no disagreement in the concept, there was nobody that added any billets to my roles, which is what I wanted. 1900 214

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22

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Miller

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Q On March 28th there were not any

3

engineer I's on-site?

4

A If there were, they were Central Jersey

5

engineers who were going to Forked River.

6

There were probably no engineer I's on-site, maybe

7

one, as far as Met Ed. And did you get a commitment to him

8

My point there was that we could develop

9

expertise for the coming years with these units.

10

I felt that we should have added, I would say six

11

to ten, but I think I would have felt we should

12

have added a significant number of engineers.

13

Q Was this concern indicated to you by

14

the superintendent for Technical Support?

15

A This concern was my own. I think they

16

agreed with it. This was based on -- if you look

17

at what we discussed yesterday -- the fact that I

18

held two jobs for a couple of years. We did try

19

to find people in those intervening years. You can't

20

just appoint a superintendent.

21

We didn't find Joe Logan for a year.

22

We hired him in January '78 and he still didn't

23

become a superintendent until December. He had

24

17 years' experience.

1900 215

25

But my concern was that we were losing

1  
2 senior people and that the senior people that were  
3 here I felt were pretty challenged, and you couldn't  
4 go on at that level of challenge forever, and that  
5 the only way out of that was to develop in-house  
6 talent that would stay with you.

7           My concept of how to do business was  
8 not necessarily the company's.

9           Q     Looking at page 8 of Finfrock Exhibit 11  
10 under the title "Discussions," the second paragraph,  
11 last sentence in that paragraph indicates with  
12 respect to hiring that, "Any of us who conduct  
13 interviews find it hard to sell our company when  
14 the salary benefits mismatch is so apparent at  
15 times."

16           What was that statement based upon?

17           A     Well, the data presented there was my own  
18 internal data. I believe it to be accurate.

19           What I was saying I believe there  
20 was that to hire an engineer II or III or an  
21 engineer senior, that you could hire one of two  
22 ways. You could hire a man without nuclear  
23 experience and take the time to train him.

24           Then you could hire a guy with nuclear  
25 expertise, which we had to go out of the Navy

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Program, which was the first place.

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In my estimation the salary levels

the company had defined had a hard time competing

and, in fact, we would have to get people to take

the job at less salary than they were offered

at B&W or somewhere else. concept of how to do business

It is my experience that most of the

Navy people were making more money than we could

offer them already, and that we were competing

with a vendor that could offer more money.

I felt that salary restriction was

the big reason I couldn't hire.

I had had contact with some number

of these people and I could not hire them.

The ones we did hire, we hired at

about the allowed ratio, which is every job in

Met Ed has a grade level, like anywhere else,

like in the Government, and if you are at that

grade level you are at 100 percent.

Most of the people we hired and that

I knew of that were good, and by "good" I mean

experienced and ambitious -- we hired at above

that grade level.

So we really, in my mind, needed to

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1900 217

2 consider these people on a grade level where we  
3 had to really go to get them.

4 I had written letters relative to  
5 retention and that stuff which I referenced in  
6 the beginning, in 1977.

7 Q Did you get any specific response from  
8 this committee as to that statement?

9 A There was a specific response following  
10 the meeting in that I believe the personnel director  
11 of the company was directed to come down here and  
12 sit with me. -

13 There was no action that I know of  
14 taken, though. There may have been action planned,  
15 but not that I remember being implemented.

16 There was discussion about the person-  
17 nel office of the company, and there was some  
18 increased attention on personnel.

19 Q Looking at page 9, you indicate in the  
20 third complete paragraph a concern of office  
21 communication within the GPU companies. Do you  
22 see that statement?

23 A Yes.

24 Q What was the basis of that statement?

25 A Again, this is relative to personnel. The



2 basis of that statement was that you couldn't  
3 seem to get personnel considered in other companies  
4 very easily. There was agreement to do it, but  
5 you couldn't get one personnel department to  
6 talk to the other one.

7 One specific case, I guess, was one response  
8 my mind where I tried to transfer a man to Penelec,  
9 and it took six months. I thought that was just  
10 not called for, for someone to perform to a decent  
11 level who had made an honest request.

12 For months we went on, and there had to  
13 be communications, and it took me largely and it  
14 took a line management guy to make things go.

15 I had a couple of specifics on my  
16 mind.

17 Q On page 12 of this exhibit, this  
18 second paragraph begins with the sentence, "At  
19 times we appear to be totally hung up on policy  
20 even to the point of being ridiculous or incredible."

21 A I was thinking of some specifics. I didn't  
22 think that our policies and practices in personnel  
23 were adaptable to unique situations as we had  
24 at Three Mile Island.

25 The examples in my mind were that I had

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Miller

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people who had worked for me for five years, much

3

of 2,000 man-hour years and had accumulated vaca-

4

tions, and the company took excessive pains in

5

documentation to carry a vacation over.

6

MR. YUSPEH: What does that mean?

7

THE WITNESS: That means that to allow a

8

a man to take his vacation the next year, it

9

took an excessive amount of paper and docu-

10

mentation for that to occur.

11

MR. YUSPEH: Rather than simply carrying

12

it?

13

THE WITNESS: Rather than simply

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carrying it over and considering the unique-

15

ness of a situation and considering that a

16

manager like myself had reviewed that.

17

There were instances of the overtime

18

policy which changed over the year and which

19

had limits set on it, while you had guys

20

that had been on continuous overtime since

21

1976.

22

It seemed like a finite set of years

23

on how many hours they had to work to get

24

paid and how much they had to average to

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get paid, that type of thing.

1  
2 We demonstrated total inflexibility  
3 might have been good for the system, but it  
4 was rather hard on guys that you had asked  
5 for the kind of commitment we had asked for  
6 some of the people to perform here.

7 I felt, like I said, the best way is that to  
8 could put it -- I felt we should have had  
9 more flexibility for unique situations with  
10 people who had given you some of the kind of  
11 commitment that some of the people who had  
12 worked for me had in the last period.

13 Q On March 28th you were not on-site at  
14 4:00 a.m., correct?

15 A No.

16 Q How were you advised of the reactor  
17 trip?

18 A Okay. On March 28th I was scheduled to go  
19 to Oyster Creek for a refueling critique of Oyster  
20 Creek's last refueling.

21 I was advised at 4:00 a.m. in the morning  
22 by the shift foreman of Unit 1, Dale Pilsitz,  
23 that the turbine and reactor had tripped, and I  
24 didn't know if it was exactly 4:00 a.m., but it  
25 was one of the initial notifications, probably

11

Miller

designated to be made to Bill Zewe.

As we talked earlier, that was one of the things, I would be told. I believe a lot of other people were called at the same time, but that is in the testimony.

Q Bill Zewe had <sup>felt like I said, the best way</sup> suggested to the shift foreman in Unit 1 that he should call you?

A That is what I remember the shift foreman telling me. He probably picked the Unit 1 shift foreman because he had the time. Unit 1 was not operating.

Q They called you by telephone?

A Yes.

Q At home?

A Yes.

Q At your home?

A Yes.

Q And what exactly did he tell you?

A Everything that I could remember about what he told me is in my previous testimony, rather than what I can remember today.

Basically he just told me that Unit 2 had a turbine and reactor trip.

Q Did you ask any questions at that time?

1  
2 A He was in Unit 1. I don't remember. If  
3 there's anything in my testimony, I don't remember  
4 it anymore. But I don't think I would have asked  
5 him, because he was the Unit 1 shift foreman, and  
6 he wouldn't have known. I would have been aware  
7 of that.

8 Q Did you indicate to him any action that  
9 should be taken at that time?

10 A He indicated to me that he was helping make  
11 notifications. So I was aware that would involve  
12 Joe Logan and George Kunder, who were the senior  
13 people in Unit 2. I didn't tell him to do anything.

14 Q How far is your home from the plant?

15 A Ten minutes.

16 Q And did you at that time come into the  
17 plant?

18 A No. Had I been slated to be here that day,  
19 in fact, I might have come in. I didn't. I got  
20 up fairly early anyway, somewhere in that time  
21 frame 4:00 to 5:00. When he called at 4:00, I  
22 believe I slept briefly or I think I stayed up and  
23 did mail, the mail being office mail.

24 If you look at my testimony, I called  
25 back in myself. You see, they would have known I



1  
2 was scheduled to be out of town. The superintendent  
3 would have known. So I called back in somewhere in  
4 the 5:00 o'clock time frame on my own to find out  
5 what was going on before I left.

6 Q And you called back in to Unit 1?

7 A Unit 2. I had a number to call.

8 Q And who did you speak with when you  
9 called back in to Unit 2?

10 A I think George Kunder answered the phone.  
11 That is in my testimony.

12 Q What did you talk with him at that point  
13 about?

14 A I forgot to bring my documents with me today,  
15 my testimony being the documents I am referring to.

16 Q You want to refer to your testimony on  
17 May 31st before the Presidential Commission?

18 A Yes, which was prepared, the contents of that  
19 were prepared around the middle of April, within  
20 two weeks.

21 MS. GOLDFRANK: Let us mark this  
22 as Miller Deposition Exhibit 113.

23 (Document described below was marked  
24 Miller Exhibit 113 for identification, this  
25 date.)

14

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Miller

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THE WITNESS: I presented a 30-page

3

document to the Commission.

4

Q Is this it (indicating)?

5

A This is a summary of the 30-page document you  
are holding.

7

Q Is that it? I had a number to call.

8

A Yes, that is it.

9

MS. GOLDFRANK: We will mark that as  
Miller Deposition Exhibit 114, which is a  
30-page statement by Gary Miller for his  
testimony before the Presidential Commission.

13

14

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16

(30-page statement by Gary Miller for  
his testimony before the Presidential Com-  
mission was marked Miller Exhibit 114 for  
identification, this date.)

17

(A brief recess was taken.)

18

19

20

THE WITNESS: I called back at, I  
guess, approximately 5:00 or 5:15, and George  
Kunder answered the phone.

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As I have testified, the best I can  
remember is I discussed with George the  
service of the recovery. That would in-  
volve whether he was using the designated  
procedures. A couple of plant parameters

Miller

were discussed.

As I said in my testimony, I felt I guess disturbed by the pressure being low and the pressurizer being really solid.

George and I talked for a while.

Then following that, I wanted to have another call with some more expertise on the phone. In my mind also was the fact that I was probably deciding to stay for the day.

So in between the 5:00 o'clock call I set up a call after 5:00 o'clock or 5:15, I started the process of getting up a conference call with Jack Herbein and Lee Rogers out of B&W. I picked Lee because it was a primary part of the plant, plus his experience, and myself and Kunder. I didn't want to disturb Bill Zewe who was shift supervisor.

In between all that I also had to make phone calls to various people in New Jersey. In the time frame of 5:00 o'clock I was probably on the phone until I left the house.

BY MS. GOLDFRANK:

Q Did you in your 5:15 call with Mr. Kunder give any instructions to him at that time?

BENJAMIN REPORTING SERVICE

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A I don't believe I did.

Q And you set up a conference call with Mr. Herbein, Mr. Kunder and Mr. Rogers.

A And myself.

Q And yourself?

A Yes. Additionally, as I said, I called -- and that is not in here -- but I did call some people that were involved in going to New Jersey with me and alerted them that I probably wouldn't go, and called Dan Shovlin, Maintenance superintendent and Jim Seelinger, Unit 1 superintendent.

At that time I was probably thinking most of all of the fact that Unit 2 had come down and Unit 1 was hot and there was the end of refueling.

I guess my biggest single concern would have been with the maintenance we were to do in Unit 2 while shut down, and secondly, we couldn't keep both units hot because of the auxiliary steam capacity.

If we didn't resolve the Unit 2 problem that day, we would have to decide which unit probably to cool down.

So priority decisions probably would

BENJAMIN REPORTING SERVICE

1  
2 occur.

3 I didn't feel comfortable with  
4 what George told me.

5 I can't remember all the details.  
6 That is the reason for the next call, was to  
7 get narrowed down more on the plant's problems  
8 that we had.

9 Q The next call, meaning the conference  
10 call?

11 A The conference call.

12 Q Why was Mr. Logan, Unit 2 superintendent,  
13 not included in that call?

14 A I haven't got it in here, but I think I  
15 knew Joe Logan was apprised, but he lived a distance  
16 from the plant. I think it takes Joe Logan 50 to  
17 60 minutes to come. I don't believe I assumed --  
18 I may have assumed in my mind he was enroute. I  
19 guess I would have assumed, on the other hand, if  
20 he was there in the control room, I would have  
21 been talking to him at the same time.

22 George happened to pick up the phone.  
23 I knew George was making notes and calling people  
24 and George was Technical superintendent.

25 Q The conference call you were setting



1  
2 up with Mr. Herbein was not on the site, correct?

3 A Yes.

4 Q He was in Reading?

5 A Yes. One part of this call would have  
6 been the Unit 2 control room. When I say "Mr. Kunder"  
7 I really meant the Unit 2 control room, shift  
8 supervisor's office, not out on the console.

9 Q So the question of Mr. Logan being at  
10 home would not influence whether or not he was  
11 included in a conference call?

12 A No, that wouldn't have influenced it, no.

13 Q Did you inquire as to where he was at  
14 that point?

15 A I can't remember if I did. I may have in-  
16 quired had he been notified, but I don't remember.  
17 I would have assumed he would have been notified  
18 since I was notified. I would have been the last  
19 one in the line.

20 Q And why was Mr. Logan not included in  
21 that conference call when he arrived in the  
22 control room during that call?

23 A No reason from my end. I didn't ask him,  
24 but I don't know what time he arrived even. So  
25 there would have been no reason to exclude him. I

1  
2 guess I would have assumed without thinking that if  
3 he had been there he would have been involved. I  
4 specifically did not want the shift supervisors.  
5 That is, I wanted to talk to somebody who had  
6 some familiarity with the plant condition. Either  
7 him or George would have sufficed.

8 Q You did not ask for Mr. Logan?

9 A I did not ask for Mr. Logan.

10 Q In that conference call with Mr. Herbein  
11 and Mr. Kunder and Mr. Rogers and yourself,  
12 what did you know during that conference call with  
13 respect to pressure?

14 A I think we knew pressure was still around  
15 1100, it was still low.

16 Q And what did you know in that conference  
17 with respect to temperature?

18 A I can't remember a discussion on temperature.  
19 I remember more discussion on the pressurizer being  
20 high. The one thing that I can remember -- and I  
21 don't know how good Lee Rogers' or Jack's memory  
22 is, but the one thing that I think got asked on the  
23 phone I do remember, is I think Lee was the guy  
24 that asked if the electromatic block valve, the  
25 electromatic one or both were shut.

1  
2 That is my only real memory. It might  
3 be because of the emphasis of the valve, but I  
4 remember that word coming back that it was.  
5 We didn't ask the question, "Was it just shut."

6 I think I remember something in the  
7 background or somebody checking on it. Lee asked  
8 that question and the answer came back it was shut.  
9 I guess we went by the thought process, trying to  
10 figure out what was next.

11 When we got done with the call, my  
12 best memory is-that Jack wanted me to go in for  
13 sure right then and there to get ready to go in  
14 and to get back to him.

15 I think Jack was in Philadelphia at that  
16 time. I don't believe he was at his normal  
17 residence. I believe he was on Naval Reserve.

18 Q What did you know during the conference  
19 with respect to the high pressure injection?

20 A I don't believe we discussed it. I think  
21 we knew sometime, or I knew sometime between 4:00  
22 and that call that the high pressure injection  
23 had come on, and I would not have thought that to  
24 be unusual in a turbine reactor trip in Unit 2,  
25 because that occurs at times, depending on the

1  
2 severity of the trip.

3 So in my mind, I was conditioned to  
4 expect HPI injection at the time, depending on  
5 how quick the trips occurred, it could occur that  
6 way with the pressurizer getting fairly low.

7 (Continued on the next page.)  
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Q Did you know that the HPI had been throttled back?

A I remember discussing it. I didn't know it specifically.

Q During the conference you did not discuss the HPI situation?

A I did not discuss the HPI situation. We discussed more the pressurizer and the pressure situation. That is one of the reasons Lee Rogers asked the question about the valve.

Q What did you know during that conference with respect to letdown?

A I don't remember discussing it.

Q What was your knowledge of it?

A I just can't remember any discussions or knowledge of it. I myself -- it would have been, if they went into their procedures for ESAS, I think that addresses letdown, but I didn't have a discussion with them. My knowledge of it would have been to the extent that I could remember a procedure.

Q You had no specific discussion with respect to that?

A No.

1900 233



Q What was your knowledge during that conference with respect to makeup tank level?

A I don't remembe any discussion of that.

Q Did you have any knowledge prior to that conversation with respect to makeup tank level?

A Not that I can remember.

Q What was said by Mr. Herbein in that conference?

A I can't remember specific questions that he asked. The only thing that I concluded is that he told me to stay here through the day and get in and get back to him.

Q You don't remember specific questions he raised?

A No, I don't.

Q Other than Lee Rogers asking whether or not the PORV was stuck, do you remember anything else specifcially Lee Rogers said?

A No, I don't.

Q Do you remember anything specifically that Mr. Kunder said?

A I don't today, I don't remember any more than is in here and I can't remember the specific

discussions.

Q Do you remember generally what Mr. Kunder said?

A No. There was concern. George was concerned over the pressurizer being high. That is the only thing I can remember.

Q Do you remember generally what Mr. Herbein was concerned with?

A The only general thing I can remember was that he had a concern, and that is the reason he would have directed me to go in and get specifics and get back to him. Maybe it is a lack of understanding, but that is the best I can do and I remember.

Q And was there a general concern expressed by Mr. Rogers?

A Yes. I don't think he understood what we had either. I don't think any of us understood the reason for the pressurizer being high. We all kind of agreed we do need help, and at the end of the call agreed we were both going in.

I asked Lee that question at the end of the call.

Q Did you instruct -- did you give any

1  
2 instructions to Mr. Kunder at the end of that  
3 conversation?

4 A Not that I can remember, other than I think  
5 I probably told him I would be in.

6 Q Were any instructions given to him  
7 by Mr. Herbein or Mr. Rogers?

8 A No.

9 Q Did you express any disapproval to  
10 Mr. Kunder as to actions that were being taken  
11 in the control room at that time?

12 A I did not express any disapproval. I would  
13 not have been able to approve it either. I would  
14 have wanted to get in before I discussed the  
15 action. That would have been the way I did business.  
16 I wouldn't have disapproved of his actions. I  
17 would have assumed that Mr. Zewe was in charge.  
18 He was the licensed guy, and George not having  
19 a license -- George had a good engineering back-  
20 ground but he was not licensed on Unit 2.

21 Q Did you agree with the stopping of  
22 the reactor coolant pumps?

23 A No, I didn't. I wasn't asked to agree  
24 to that that I can remember.

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1900 236

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Miller

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Q You expressed no --

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A I don't believe I gave an opinion on that or was asked. I don't remember.

5

Q You did not express a concern either

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ay with respect to the stopping of the reactor

7

coolant pumps?

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A I can't remember if I would have expressed

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one along the lines of stopping at all. I don't

10

remember any discussion of stopping during that

11

call. When I arrived, I think we were trying --

12

our goal was to start up pumps. We may have

13

discussed starting the pumps and Lee Rogers might

14

have. I just don't remember.

15

One of the things we did right after

16

I think we tried to start the pumps right after that

17

in the unit. We tried to start pumps again shortly

18

after 7:30 or some time.

19

Q Were the reactor coolant pumps stopped

20

during the conference?

21

A At the time I don't remember knowing it, but

22

if you look at the chart, they were stopped before

23

the call, I would believe.

24

Q You do not remember whether or not

25

at the time you had knowledge?

1900 237

1  
2 A I don't remember our discussing that. We  
3 might have. I could be wrong in my memory.

4 Q Do you remember if you had knowledge  
5 of whether the reactor coolant pumps were stopped?

6 A I just can't remember. That may have been  
7 discussed, but I just can't remember. That, to the  
8 best of my memory was discussed, but I don't believe  
9 it was discussed with approval or disapproval.

10 When I looked at the document that  
11 I have been given, which was written within two  
12 weeks, the only thing that I can remember in there is  
13 that the pump, it says the pumps were off, loss  
14 of flow indication, electromatic was shut, and  
15 there was no radiation indication.

16 Those were the kinds of things that  
17 I remembered at the time, but I can't remember  
18 today.

19 Q So you were aware that the reactor  
20 coolant pumps were stopped?

1900 238

21 A I am taking this from the fact that within  
22 two weeks this thing was shut down and I tried  
23 to remember that. This is what I said before and  
24 that's what was in the best of my memory that they  
25 were off, and they were off by the chart. But



Miller

we didn't know that at the time.

Q But you don't remember whether or not you made a comment concerning the fact that they were off?

A No, I don't.

Q You indicated that you had called back to the Unit 2 control room and talked with Mr. Kunder about 5:15 that morning?

A Yes, that is the best of my recollection. It could have been different than that, it could have been a little earlier, but not much.

Q And at that time you indicated to him that you wanted to set up a conference call, correct?

A Yes. At the end of that call I told him I wanted to get some more people on the phone and set up a conference call and discuss the situation.

(Continued on the next page.)

1900 239

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Q It took from that call, approximately at 5:15, until approximately 6:00 to set up that conference call?

A 6:00 or a quarter to 6:00. I don't remember exactly what time. I had to get the conference operators who were willing to do that, to find Jack Herbein and find Lee Rogers, and he was in Philadelphia, and I had to call Dan Shovlin and Seelinger, and that is where that time went.

Q After that conference call, you indicated that Mr. Herbein suggested that you go stay at the Island and come in to the Island, right?

A I think Jack directed me to go in and get back to him.

Q At what time did you arrive in the control room?

1900 240

A I arrived in the control room around about 7:00 or thereafter. It says here, 7:05, but that is an approximation. I came in the south gate that morning, so you wouldn't have -- the gate log wouldn't have captured me, and I arrived at the site emergency because the gate was piled up with cars, so I know I arrived after ten to 7:00, or somewhere around 7:00 I was in the control

2 room, and I had arrived at the other end of the  
3 Island and proceeded from there to the control  
4 room.

5 Q The south gate does not keep a log of  
6 exits and entrances?

7 A When I went in, due to the traffic, I went  
8 to the south gate and I went directly in, and I  
9 don't know that the guard would have recorded me,  
10 but he may have, but I don't think he did. He  
11 knew me, and knew who I was, and he knew I was  
12 coming and and he knew there was a site emergency.  
13 The south gate is the closest to my home, and that  
14 is the only reason I went to the south gate, and  
15 I was thinking there might be some traffic at the  
16 north gate, so I came to the south gate.

17 Q When you arrived, you went directly to  
18 Unit 2 control room?

19 A I had gotten called by Dan Shovlin somewhere  
20 around 6:30 or 6:40 -- 6:40, probably -- in the  
21 middle of preparations -- in other words, this  
22 whole period from 4:00 o'clock, I had never had a  
23 chance to take a shower or do anything, drink a  
24 cup of coffee, and I was on the phone in between.  
25 I had very little time to do anything that I had

2

to do.

3

At the end of the last call with

4

Jack, I started to make faster preparations to get

5

to the Island, and in the middle of that Dan called

6

me and gave me the radiation reading which was high,

7

the sample, and I left quickly after that. I knew

8

we had a problem so that is the reason I came to

9

the south gate. I knew I wanted to get in soon.

10

He told me to come in.

11

Q Since you had led people to believe that

12

you were the individual in charge, why did it take

13

you from 4:00 a.m. to about 7:00 a.m. to arrive on-

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site?

15

A I really don't think I led people to believe

16

I was the individual in charge at 4:00 a.m.. I think

17

at 4:00 a.m. until we got to the 6:30 timeframe,

18

we were dealing with a plant transient, an- the

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guy in charge would have been Joe Logan.

20

Now, I would have been involved in

21

the discussion, because I would want to have known,

22

and I had to explain to Jack before the day was

23

out, what we were going to do.

24

The way our structure works, that would

25

have been the normal method of doing business. I

1  
2 would have been involved even if I had gone to  
3 Oyster Creek, I would have been on the phone part  
4 of the day here with Joe Logan, and then been on  
5 the phone with Jack Herbein, and that would have  
6 kept Jack dealing with me and not with the plant.  
7 So the priorities in the plant wouldn't have been  
8 disturbed. It is my job to deal with him and to  
9 deal with the plant, so I would have talked to  
10 George Kunder, Joe Logan, whoever would have answered  
11 the phone. I would not have talked to Zewe, because  
12 he was in charge and I didn't determine a need to  
13 go in at 4:00 a.m. in Unit 2 which was in its  
14 initial operation. It had, in fact, operated  
15 through the months, through the Unit 1 refueling  
16 smoothly, so I am saying I was not the Unit 2  
17 superintendent, and Joe Logan would have been  
18 responsible for the outage, for the meetings, for  
19 the recovery, but I did have an interest when  
20 George told me what he did, and that is the reason  
21 I called back.

22 Q When George told you what he did?

23 A When he told me -- the first interest I  
24 would have had would have been to find out, and  
25 before I left I called back in and I was really



1  
2 trying to find out the status of what we were  
3 going to do. I knew that Unit 1 was trying to  
4 go critical that day too. I knew we might have  
5 some priority decisions or manpower decisions or  
6 Maintenance decisions to make, and I knew the  
7 guy who had to make those decisions was me.

8 I now had two superintendents with  
9 two units both down, and they would probably have  
10 a hard time agreeing over who or which unit was down.  
11 I knew that decision was mine from that aspect and  
12 yes, the aspects of inside the plant, the unit  
13 superintendent is in charge. He is licensed and  
14 in charge. I take an interest because we have  
15 a close organization in that I have the responsibi-  
16 lity or I had the responsibility at the time to  
17 keep pretty close to the specifics of the problems  
18 so that I can provide Jack, you know, pretty  
19 good detail of what we were doing and why.  
20 That was normal.

21 Q Since you indicated that you thought  
22 Mr. Logan, as Unit 2 superintendent was in charge,  
23 why did you not talk with him that morning?

24 A No reason that I can think of, other than  
25 I didn't know if he was in yet or not. George was

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senior enough that I would have been happy to talk to either him or Joe. No reason.

My first initial part of this was in trying to gain understanding of what they were going to do.

George could have given me an understanding or Joe could, and as we progressed into the morning, I guess I wanted more information.

Q You indicated that since you felt Mr. Logan was in charge as Unit 2 superintendent, that you were just taking an interest in what had happened when Unit 2 had a trip, correct?

A Interest and understanding so that I would have -- eventually he would have had to explain to me or Jack or both of us, the cause of this trip and the action taken; that would have been the normal way of doing business.

For example, the flow problem in the reactor coolant pump, which we talked about before today here, that problem entailed discussions between Jack and me, me and Joe, Jack and Joe, Joe and GPU; in other words, the interface -- the management interface could have been directly with me or directly with Jack, but eventually that

2 day, as a matter of doing business, Joe would have  
3 had to fully explain the details of that trip to  
4 myself or to Herbein, depending on who would have  
5 gotten in touch with him. Typically, so I would  
6 have been the one in between.

7 Q When you say that your participation  
8 in the lengthy conference call with Mr. Herbein  
9 and Mr. Kunder and Mr. Rogers was more than just  
10 taking an interest in the status fo the plant?

11 A I didn't characterize it as taking an interest.  
12 I think we started the line of questioning by your  
13 asking who was in charge. I characterized -- I  
14 was trying to gain a full understanding of the  
15 situation, but I think in the early phases I was  
16 trying to really gain an understanding of what  
17 severity problem we had. Any time either unit  
18 trips, the immediate action is taken by the super-  
19 intendent. Those decisions are his or the shift  
20 supervisor really. Pretty close to that has  
21 always been a discussion with the station super-  
22 intendent. That is just the way we have always  
23 done business, so it is an obligation more than  
24 an interest.

25 Q When you arrived in the Unit 2 control

1  
2 room, whom did you first contact?

3 A When I arrived in the Unit 2 control room,  
4 I believe I made contact with a couple of people.  
5 I can't remember all of them. I can remember Joe  
6 Logan was there and George Kunder was there and  
7 Bill Zewe was there. I guess I was under the im-  
8 pression that Bill Zewe was in charge of the control  
9 room, but, you know, George was describing that they  
10 had declared a site emergency.

11 I think Mike Ross was there. I think  
12 there was quite a group of people there and what  
13 I did is I got off to the site and got them to  
14 brief me on what was going on.

15 Q Who did you get to brief you?

16 A I spent a very few minutes with Bill Zewe.  
17 I think that Dick Dubiel and Joe and George and  
18 Mike talked to me, all briefly. They told me  
19 where we were, and we declared a site emergency.  
20 I don't remember all the specifics. I knew we were  
21 in emergency plan.

22 Q A site emergency?

23 A Yes, I knew we had declared a site emergency.

24 Q When you arrived in the control room,  
25 what was the reactor coolant pressure?

2 A I don't specifically remember.

3 Q Did you inquire as to what the reactor  
4 coolant pressure was?

5 A I think I got plant parameters presented to  
6 me. I am sure I did, but I don't remember the  
7 exact pressure.

8 Q Do you remember if it was still low?

9 A I don't remember what it was, but it wasn't  
10 normal, and I am sure it was still at least --  
11 the low being the low in the 1600 or 1700 set point  
12 for trips for ES, the low operating conditions for  
13 a hot unit and temperature was, if I remember right,  
14 temperature was off-scale, the hot legs were off-  
15 scale high and the cold legs were a peg low.

16 Those were the biggest scale factors  
17 I'd say. I saw the radiation indications were a  
18 major factor that I was just worried about because  
19 of the fact that once I knew we were in emergency  
20 plan, and then you have the plant problem, and  
21 an emergency plan is a separate set of commitments  
22 which you have got to go through.

23 Q When you arrived in the control room,  
24 what was the HPI situation?

25 A I don't remember the discussions on HPI at



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Miller

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the time I arrived. There must have been, but

3

I don't remember the status or flow rate.

4

Q When you arrived at the control room,

5

what was the letdown situation?

6

A I don't remember discussing it. Letdown

7

was a consideration we had all through the day,

8

and it is hard for me to separate 7:00 o'clock

9

in the morning what we were talking about as far

10

as letdown, because it became an item we discussed

11

continuously throughout the day. We had trouble

12

getting letdown later in the day, and I can't

13

separate out and remember the early part of it.

14

Q When you initially came into the

15

control room after you were briefed as to the status

16

in the plant, what orders did you issue?

17

A The fact that we were in a site emergency

18

caused me to -- and I was looking through my pre-

19

vious testimony to see if I could find what I had

20

said or remember it from that time, but the fact

21

that we were in a site emergency put me in a defined

22

situation by our plan, and I began to function in

23

accordance with the emergency plan, and since about

24

1974 or 1975 I have run the emergency drills here

25

for the most part, so I began to function in the

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2 way I would have in those emergency drills and I,  
3 in fact, have a set of emergency drill cards which  
4 somebody has a copy of, that I use for the drills  
5 every year, and that more or less helps me put  
6 people in the places I want them, and that is  
7 what I did.

8 I put Mike Ross in charge of Operations,  
9 and told Bill Zewe to report to him. I picked  
10 four or five people that I would talk to, and  
11 I tried to clear the control room to be sure that  
12 it was quiet. I think I very loudly told people  
13 up there that I was the emergency director.  
14 That is the way we are trained to do it, and that  
15 is what I did, and I put people in charge of various  
16 areas that I felt were the best and that they had  
17 formerly functioned in the emergency plan, and we  
18 were lucky to have the most senior people, probably.  
19 I had Dan Shovlin put in charge of Maintenance,  
20 Mike Ross -- Jim Floyd would normally have been  
21 there, but he was in Lynchburg, and Mike Ross  
22 was qualified in both units, and Dick Dubiel  
23 functioned with him on the emergency plan, and  
24 Jim Seelinger, I left in Unit 1 to help in the  
25 Unit 1 control room, to help assure that the

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Emergency Control Center, which is physically in Unit 1 was set up, and the notifications, I think I discussed, probably with George Kunder, and I think Joe Logan was told to get procedures and plans out, to plan an emergency and help assure that the steps in them are carried out, and he was already doing that.

Q Why was Mr. Zewe ordered to report to Mike Ross as opposed to Mr. Logan, who was Unit 2 superintendent?

A I don't know that I had a reason in my mind other than the Operations supervisor. In my mind, being qualified on both units and being a senior operator, he was the best Operations guy I had, better than myself or Joe Logan from a strictly Operations standpoint. Joe Logan was senior to Mike Ross. There would have been no prohibition with respect to Joe Logan discussing things with Mike Ross.

There was no restriction -- I needed Joe's help in the overall as far as the plant and the emergency plan, from that time on, I began to first worry about the emergency plan, the notifications, the establishment of all our

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2 communications, and our next 45 minutes was taken  
3 up with a kind of set pattern of calls and deci-  
4 sions.

5 My first concern at that time was to  
6 get teams out and to make a projection off-site.  
7 We did that pretty rapidly, and that projection  
8 came back high, I guess, before we proceeded very  
9 much further.

10 I think that the dome monitor was  
11 above the criterion for site general emergency,  
12 and then we have to start the same notifications  
13 all over again with accordance with the plan. You  
14 could just have a site emergency, but you've got  
15 the same factors for a general emergency, but the  
16 potential for the site goes over that.

17 Q You felt that Mike Ross had more  
18 operational experience, and that is why you had  
19 Mr. Zewe report to him?

20 A I wanted Mr. Zewe to have as much freedom as  
21 he wanted on the panels, as far as not being bothered  
22 on the panels, and it was just that Mike was his  
23 senior in Operations.

24 Q Did you issue orders concerning HPI?

25 A As I have stated in the testimony before

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2 the Commission, somewhere in the early time frame  
3 of that -- what we set up was that group caucussed  
4 in the shift supervisor's office at various points,  
5 and to my memory in the first caucus, which I put  
6 down here somewhere, we discussed HPI, and we  
7 discussed the situation, and I think we had tried  
8 to start pumps by then, and I had told Mike Ross  
9 that I think HPI would not be turned off without  
10 my knowing about it.

11 Q That would have been when you initially  
12 came into the control room?

13 A No, that would have been somewhere in the  
14 7:30 to 8:30 time frame when we had time to  
15 sit down for a couple of minutes and discuss where  
16 everybody was. And what we did, I sat down with  
17 those five or six people whom I designated, and  
18 each guy would report on his area, and then dis-  
19 cuss emergency plan action, the planned action,  
20 and in those discussions, I think that in the  
21 initial conversation we had, we realized we had  
22 steam voiding the loops because of the pump indi-  
23 cations, and I think we realized that we had one  
24 generator isolated and I think we discussed the  
25 heat sink. I think we discussed the condition we



1  
2 were in as being a pretty abnormal one, not really  
3 stable in our mind, and at that time we discussed  
4 HPI, and I think there were people in the group  
5 that I think wanted to take HPI and turn it --  
6 throttle it or terminate it.

7           It is very hard to remember the  
8 exact words, but my memory is I told Mike Ross that  
9 we didn't really, in my mind, have the plant in a  
10 condition that was recognized by the procedures,  
11 and that HPI was something that I did understand  
12 and I wanted it only changed through me.

13           Q       Did you know what level HPI was at?

14           A       I didn't, that I ever remember, give Ross any  
15 number of pumps or flow rates. I probably would  
16 have made the assumption in my mind that he would  
17 make that judgment. I didn't want it turned off  
18 without my knowledge because the first discussion,  
19 I think, in the group, and I don't remember who,  
20 of turning it off, so I didn't want there to be  
21 any confusion about that. I didn't go to the next  
22 step and say this many gallons a minute. People,  
23 I think, asked me in this testimony about whether  
24 I gave a number. And then I think Ross has said  
25 what number he gave, and I have said that if he

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1  
2 had given me that number I wouldn't have changed  
3 it. I have been taught through analysis that one  
4 pump -- it doesn't necessarily cover this condition,  
5 but one-pump flow, which is what I think Ross was  
6 told -- I would not have changed that if somebody  
7 was to ask me that at the time, I don't believe.

8 Q Why were you issuing orders concerning  
9 plant status when Joe Logan was present and he is  
10 licensed on Unit 2 and you are not?

11 A The way I set up the organization that morn-  
12 ing, once we were in an emergency situation, I  
13 was the senior individual on the Island in overall  
14 charge, and I specifically designated people in  
15 the functional areas that I needed, and who I  
16 assumed that they had expertise in the area.

17 When the group that I appointed sat down  
18 we all knew that the plant was in an abnormal  
19 condition, and therefore we all had inputs,  
20 "we" all being Lee Rogers, Joe Logan, George  
21 Kunder, Mike Ross, and I brought over Jim  
22 Seelinger because he had Unit 2 experience, and I  
23 brought him over somewhere around 8:00 o'clock --  
24 I can't remember exactly when -- and each member  
25 of that group would discuss the situation parameters,

2 and express their concerns and express their feel-  
3 ings on what we had to do, so, you know, I wasn't  
4 giving orders in an arbitrary fashion. I was, in  
5 my mind, responsible for making the ultimate  
6 decision. There were no decisions that I know  
7 of that day that were made operationally that  
8 Joe Logan disagreed with. I don't remember his  
9 position on HPI specifically. I don't think we  
10 could have run the situation with a vote. One  
11 guy had to be senior, and I was the senior indi-  
12 vidual, so I made the ultimate decisions, but I  
13 went with the recommendation of the expertise that  
14 was available.

15 Q So that the senior you indicate, was  
16 not the senior licensed person but the senior  
17 at the management level, is that correct?

18 A Yes.

19 Q And for that reason you decided that  
20 you were going to be the one that was going to make  
21 the ultimate decision?

22 A Yes. I assumed that responsibility and I  
23 specifically designated those people to monitor  
24 the areas, as I talked about in this testimony,  
25 and then also, as a part of that was to very

carefully review the procedures and parameters we had. And that would allow a discussion amongst the best talented people we had in the area to arrive at a step-by-step progression.

One guy had to be in charge in my mind, and I was the guy. No one else objected to that.

Q The specific role that you assigned Mr. Logan was the implementation of the Emergency Plan, is that correct?

A No. As I remember it, I asked Joe Logan to look at both the plan and the plant procedures. I left Joe freedom to evaluate the control room and the Emergency Plan, and I allowed him that freedom whereas Mike Ross I wanted to concentrate on the Operation. I wanted Dick Dubiel to concentrate on the Emergency Plan. I wanted George Kunder to concentrate on engineers and notification and the emergency, and those are the things they do on the emergency drill. I left Jim Seelinger in Unit 1 initially; that is part of the Emergency Plan. I left Joe Logan in Unit 2, and he is designated Emergency director, if I had not been here. I didn't charge Joe with a specific role because he was the superintendent. I left him

1  
2 some freedom and specifically wanted him to take  
3 a look, as I remember it, at plant procedures, and  
4 as a backup on the Emergency Procedures, because  
5 the Emergency Procedures are fairly lengthy. He  
6 would have had some freedom to move about.

7 Q What assignment did you give to George  
8 Kunder?

9 A It is hard to remember exactly, but I believe  
10 I had George in charge of the notifications and  
11 the engineers -- the notifications that have to  
12 occur are pretty numerous. The second thing is the  
13 engineers, and you have to set up things like  
14 Emergency Boards, the Emergency Plan isoplasts.  
15 It is a plastic board with a map on it, which is the  
16 basis for your projections and your direction of  
17 your time, and also in communications with the  
18 Emergency Control Center, both external and in-  
19 ternal communications, and that is the part that  
20 is kind of difficult to remember. I think that  
21 is the area George was in charge of, or helping  
22 with. Joe could have been the guy who would have  
23 helped me with some of those assignments, and would  
24 have helped me direct George, and I am sure that  
25 there were conversations that I was not part of.



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2 My goal was not to talk with more than four or  
3 five, or perhaps five or six people, so I didn't  
4 lose the focus.

5 Q You declared the general emergency?

6 A Yes.

7 Q On what basis was the general emergency  
8 declared?

9 A I believe the dome meter radiation exceeding  
10 the 8 rem criteria. I am pretty sure that is what  
11 it is. I think I said that in here in these  
12 minutes.

13 Q There are certain criteria that are  
14 set out that you would automatically declare an  
15 emergency?

16 A There are criteria in an emergency that  
17 require you to declare -- I might make a judgment  
18 to declare it in addition to that, but there are  
19 certain criteria, and one of them being the radia-  
20 tion reading at the dome monitor, one of them  
21 relating to radioactivity in the vent stacks, and  
22 one of them relating to the river, and one of the  
23 other ones probably relates to the conditions in-  
24 dicative of a loss of coolant accident, like a  
25 low reactor coolant pressure with a high building  
pressure.

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1  
2 Q You declared a general emergency  
3 based on the dome radiation reading?

4 A I believe the dome monitor passed through  
5 the 8 rem which is the criteria.

6 At the same time there were radiation  
7 monitors going off rather frequently, so I think  
8 my decision to declare a general emergency, if  
9 you look at it, was made fairly rapidly because the  
10 situation was obviously one that could have an  
11 off-site consequence, and what you really want to  
12 do is try to gear up the whole off-site coordination,  
13 because that is what was rather obvious.

14 Q At any point on March 28th, did you  
15 believe that the core had become uncovered?

16 A I think we believed there was fuel damage,  
17 and it is very hard to remember about core uncoverage.  
18 I don't think we thought about events prior to  
19 7 o'clock. I don't think we discussed, that I  
20 remember, core uncoverage prior to us arriving  
21 there, but I think we obviously knew there was fuel  
22 damage.

23 I do not think we were so much worried  
24 about how much, but if it was reaching a stable  
25 condition in the plant, and also not having a relief,

1  
2 or knowing where the relief was, and terminating  
3 the relief because the off-site business becomes  
4 important to us as far as coordination, teams and  
5 communications, and I think in the testimony here,  
6 that I think we discussed sometime in the morning  
7 and that is how do we assure ourselves, or give  
8 ourselves double assurance that the call was covered,  
9 and that was discussed among that group and the  
10 members of the group that the core was totally  
11 covered, and other members of the group, and I was  
12 one of them, felt that HPI was having an effect and  
13 that is why the cold leg temperatures which would  
14 see some of that water coming the other way were  
15 low, and as far as the level indicated in the core,  
16 I guess there is not a level indication in the core,  
17 and therefore sitting there charging water, so  
18 all morning we discussed the core coverage, and  
19 we didn't believe the core was uncovered, and I  
20 think that probably had something to do with our --  
21 that was maybe one of the factors that helped us  
22 to decide to go down to the core flood tank  
23 pressurizer later on in the morning, and a lot of  
24 that is covered in here, as best as some of the  
25 people with me could remember.

1900 261

1  
2 Q You do not have a direct indication  
3 of the level of coolant in the core, correct?

4 A That's right,

5 Q But you do have indications of pressure  
6 and temperature that would indicate to you what the  
7 level would be in the core, correct?

8 A 'I think that you can say that you can infer  
9 directly from the level of the pressure and temperature,  
10 and what I think we felt, I think from early in the  
11 morning, and it is actually hard to remember because  
12 I think in a situation like this when I think we  
13 were convinced that we were in an emergency situation,  
14 the level of stress is rather high, and it is rather  
15 hard to remember specifics especially when you figure  
16 the number of events occurring, and that is an honest  
17 statement.

18 I think we were convinced that the hot legs  
19 were without water. We knew the water level was not  
20 normal. I think we were convinced it was hot. We  
21 hooked up the recorder or a voltage meter in the  
22 morning with a hot leg which registers temperature,  
23 and that did read when I first came in, from my  
24 memory, that the TH was off-scale in the meter  
25 which I think is 620, and that is abnormal, so

1900 262

1  
2 pressure and temperature will tell it is very hot,  
3 but they don't give you the level on the core.  
4 They are indicative of conditions within the  
5 system. We knew the water level was not full in  
6 the reactor coolant system. We knew that from the  
7 very early stages.

8 Q What is the significance of source  
9 range nuclear instruments going up?

10 A At the time, I don't personally remember us  
11 discussing that. I know now that there were  
12 increases in the source range or the intermediate  
13 range early in the morning sometime after they  
14 turned the pumps off.

15 I don't remember any increases in that  
16 instrumentation being discussed during the day  
17 after I got there, and I don't remember discussing  
18 the events until afterward.

19 Q What was the source of the high  
20 radiation reading on the monitors?

21 A I think we thought, if I remember, fuel  
22 damage to some magnitude. I don't think we thought  
23 to what magnitude. I don't think we needed to be  
24 convinced that there was radiation, and it was  
25 coming from the core. I don't think we thought



1 about anything other than what actions we could  
2 take to monitor the off-site relief and terminate  
3 and put the plant in a more stable condition.  
4 My memory is we didn't feel we were in a very  
5 recognized condition.  
6

7 Q What do you mean by not feeling you  
8 were in a very recognized condition?

9 A I don't know of any of us that ever thought:  
10 we would have the system with the water inventory  
11 situation where it was and with the conditions  
12 where we couldn't charge the plant solid.

13 MS. GOLDFRANK: Let us recess for  
14 lunch now.

15 (Whereupon, at 11:50 A.M., a luncheon  
16 recess was taken.)  
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## AFTERNOON SESSION

1:20 P.M.

GARY PAUL MILLER, resumed

the stand and further testified as follows:

DIRECT EXAMINATION (Continued)

BY MS. GOLDFRANK:

Q Do you have something to add?

A Yes. We discussed earlier who was in charge of the control room. I assumed the responsibility because I thought it was my duty to assume it, but there was never any objection by Joe Logan or anybody else or any discussion that it might not be appropriate. I think that is generic to the issue. Had someone stood up and said, "I should be in charge," we would have evaluated it.

What I am trying to say, I think it is Joe Logan was in full concurrence that I should be in charge.

Q On March 28th, who were you supplying information to?

A I really can't remember the specific numbers of people that I talked to, but basically I was really I was depending upon Lee Rogers to be my link with B&W, and the other major person I dealt with once we got

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here was Jack Herbein, mainly.

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Q Prior to Mr. Herbein's arriving

who else in GPU or who else in Metropolitan

Edison Management did you have contact with?

A I think I had contact with Mr. Klingaman

and Mr. Troffer at some point, and maybe John Hilbish.

Q Do you remember what you told

Mr. Klingaman?

A I think it was a group discussion, and I

actually have knowledge of the thing since the 28th

that there was a discussion, so it is hard to

separate what I remember on the 28th versus what

I remember learning of a conversation on the 28th

after the 28th.

We talked as a group sometime in the early

morning, and discussed it more from the standpoint

of what condition the plan was in and whatever

help that I needed, and I think they were worrying

about what they could release to the communications

people. I don't remember those conversations

anymore.

Q Who was in that group aside from

you and Mr. Klingaman?

A I think Mr. Troffer, Mr. Klingaman and

1900 266

1 Mr. Hilbish were in that group. There may have  
2 been others. There may have been someone from  
3 communications; I think there was, and I think I  
4 learned about it subsequently.  
5

6 Q Did you know that the information  
7 you were providing to them would be a basis for the  
8 information they would be providing to the public?

9 A I think I knew that. I think that was part  
10 of the call. It was a conference box call, and  
11 they had their people in their room, and I used  
12 the shift supervisor's room with some of my group  
13 there, and their group was in their room, and we  
14 talked back and forth.

15 Q At that time, they were asking you  
16 specific questions, or were you giving them  
17 information?

18 A I think there was just a dialog between  
19 us, and I can't remember the exact conversation.

20 Q Do you remember the kind of information  
21 you were providing them?

22 A I can't remember specifically. I think  
23 we talked about readings of radiation from off-site  
24 and maybe some by the plant, but I can't specifically  
25 remember. I know we would have talked about the on-

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and off-site monitors because that is the key  
effect on the public

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4

Q Did you have any contact with people  
from GPU?

5

6

A Not that I remember.

7

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There would have been contact with GPU  
notification-wise as part of the emergency plan,  
but I didn't personally have that contact. There  
may have been other people in my group that may  
have had contact that I wasn't aware of, with  
people, but not that I can remember.

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Q Did you have direct contact with the  
NRC?

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A In the morning i was assured that we had a  
direct line with Region 1. I think Havercamp,  
and I don't remember if I talked to Havercamp,  
but I do know that someone like George, and I am  
not sure if it was George, had a direct line  
with Havercamp.

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In my testimony, I think we related, to the  
best of my memory and the gate logs there were  
people who arrived fairly early in the morning,  
and by that I mean 10 o'clock and 10:30 in the  
morning, and I allowed some of them in each



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control room, and those names, as best I can remember it, are in here.

Q When people from the NRC were in the control room, did you have direct contact with them?

A Some. They were invited to the caucus meetings that I discussed earlier, and I don't remember specific discussions. They were welcome. We let a couple of them into each control room, and they were allowed to look at any parameter, and allowed to talk to the operators, and they were allowed, and in fact I encouraged them in the meetings to tell me anything that they could think of or do or any recommendation that they had.

Q Do you remember if they made any recommendations?

A I don't specifically remember, but I don't think they did. I don't think they disagreed with any that we did. Their position, I don't believe, was one to tell us what to do. I don't remember if that was exactly stated, but that was what the relationship was.

I knew a couple of them by name, and by personality, so there was -- they were a part of all the discussion, and that was the best way I can

1  
2 remember it.

3 Q Were they there as observers at the  
4 caucus meetings?

5 A I looked at them as being specifically there  
6 that day to provide their office and their people  
7 direct communication with the plant and the  
8 events going on. I looked at them as stronger  
9 than observers, but not as decision-makers or  
10 operators, and that is the way they looked at it,  
11 to my view, and I only tried to encourage them  
12 that they were welcome to participate in any  
13 discussion and to make suggestions, and I asked  
14 for suggestions.

15 Anytime I had one of those meetings, from  
16 anyone in the room, and they were openly part  
17 of that, so there would be no question about  
18 their ability to see exactly what was going on.

19 Q Was there any confusion once people  
20 were there from NRC in the control room as to who  
21 was in control?

22 A I don't think so. I knew them. They knew  
23 I was in charge. They knew I was the person, and  
24 in fact either I or Jim Seelinger, either one of us,  
25 actually let them in, so I don't think there was any

1  
2 confusion.

3 Q Did you have any contact with any  
4 other agencies that day?

5 A I have a hard time remembering especially  
6 in this time frame very many events of that day.  
7 I know I had contact at some point or was aware  
8 of contact with Dick Dubiel, or through Dick Dubiel  
9 with the State radiological people.

10 I was aware very early in the morning that  
11 the calls had been made, but as to the specifics --  
12 I had also made sure that a call was placed to the  
13 State Helicopter Police, that they were called,  
14 and later on that day I was in the Lieutenant-  
15 Governor's office, and I had conversations with  
16 people, but other than Scranton and Tom Gurusky,  
17 I am not sure who was there.

18 I don't know the names of all of them.  
19 I think that is as good as I can remember.

20 I stayed as much as I could off the phone  
21 even though I was on the phone quite a bit. Once  
22 it got past noon, some of the communications got  
23 somewhat shifted over to the Observation Center  
24 which Jack started to set up, and I am not  
25 aware of those communications.

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Q When you left to go to Harrisburg that afternoon, who was left in charge?

A Joe Logan.

Q Did you indicate to him that you were leaving, and specifically state to him that he was left in charge?

A Yes. And at the same time, I took a beeper with me, and we called back over here when we got over there so we were out of contact very little time, and never out of beeper range.

Q Your beeper reaches you in Harrisburg?

A Yes, plus the car we were driving has a company radio in it. It is my car.

Q What was the long-standing problem with balancing ventilation systems to prevent flow between Unit 1 and Unit 2?

A I am not a ventilation engineer, but the two units are connected together physically at the fuel handling building, and we, as Operations, never felt that the ventilation system design was made compatible, and by that I mean that the two units were designed together so you ended up with what we ended up with operationally. If we had something in the atmosphere in Unit 1, we

1  
2 generally ended up with it in the other unit, and  
3 that happened that morning. We had radiation -- if  
4 we had a relief in Unit 1, it would be in Unit 2.  
5 If we had one in Unit 2, it would be in Unit 1.  
6 The ventilation systems were not balanced enough  
7 for us. It would be a hard job to balance them  
8 because they are both trying to do something  
9 to the same building. The fuel handling buildings  
10 are connected physically, and air space between  
11 them is open.

12 Q Had this problem been recognized  
13 prior to March 28, 1979?

14 A To my knowledge, the problem with the  
15 ventilation systems have been recognized, not  
16 to the severity that the 28th taught us about it.

17 The fact that one unit could contaminate  
18 the other was recognized.

19 Q Whose attention was this problem  
20 brought to?

21 A I think a long time ago it was brought  
22 to Burns & Roe's attention, but I couldn't  
23 cite specific documentation.

24 I think field questionnaires were submitted  
25 early in the program, but I don't specifically



1 remember, but I know the problem was brought up.

2 Q Do you remember if you specifically  
3 submitted a field questionnaire on that problem?

4 A I don't specifically remember.

5 Q Do you know if somebody else had  
6 filled out those questionnaires, whether it would  
7 have been sent through you to GPU Startup, to  
8 Burns & Roe?

9 A It would have been initialed by me early  
10 in the program when I used to initial them and  
11 send it to Ron Toole, who would have dispositioned  
12 it for resolution.

13 Q Do you remember sending a field  
14 questionnaire on that issue?

15 A I don't remember specifically, but I  
16 think there was one sent, but that is because I  
17 just can't remember.

18 Q Do you remember what the disposition  
19 of that questionnaire was?

20 A No, I don't.

21 Q Did it come up since TMI went  
22 commercial?

23 A No, I think that was early. I think the  
24 discussions that I remember were earlier in the  
25

1  
2 planning stages of the program.

3 Q Do you know about what time that  
4 questionnaire would have been brought up?

5 A In my mind, you are talking about the 1973,  
6 1974, 1975 time frame.

7 Q It would have been that early?

8 A Yes.

9 Q On the morning of March 28th the  
10 Pennsylvania Emergency Management Agency contacted  
11 by a shift supervisor and it was indicated to  
12 them that a general emergency had been declared  
13 and that it was reported there was failed fuel.

14 A March 28th?

15 Q Yes. Why was the fuel considered to  
16 have failed if, in your belief the core was covered?

17 A I wasn't specifically aware who made the  
18 call to the State, the call that you are talking  
19 about.

20 Do you know whether that is the call that  
21 I am referring to when I went back as a part of  
22 our emergency plan? What time was it?

23 Q About 7:35 on the morning of the 28th  
24 was when the Pennsylvania Emergency Management  
25 Association was contacted and told that there was a

1  
2 general emergency declared, and at that time it  
3 was also indicated then that there was failed  
4 fuel; that agency was contacted by a shift  
5 supervisor.

6 A I am not sure who made the calls -- that  
7 is one of the calls you have to make. I don't  
8 believe the amount of failed fuel was discussed,  
9 but I don't think that was about there was some  
10 failed fuel. I don't think we discussed why it  
11 had failed.

12 The radiation monitor was thought to be  
13 an accurate indication, or somewhat accurate  
14 indication. That radiation had been released  
15 in the reactor building. We had taken prompt  
16 action to get readings in the direction of the  
17 wind. The shift supervisor would have sent  
18 that because of the radiation reading in the  
19 reactor building.

20 I don't think anybody would have thought  
21 the core was covered or uncovered. I think we  
22 thought there was fuel damage because of the  
23 sequence of events. I don't think we analyzed  
24 in our mind whether core coverage or uncoverage  
25 or the amount of fuel damage, or at least I don't

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think I did.

Q At approximately 8:00 A.M. on the 28th of March it was discovered that a train had been allowed to pass the tracks that parallel the Susquehanna River. Whose decision was it allow trains to continue to travel by Three Mile Island?

A Out of the memory bank again, I think one of the communications or notifications and I have to remember if it is by us or by the State, is Conrail which, as a normal part of our emergency drill, we'd have contacted them. I don't remember us specifically telling them, yes or no, on trains. I remember something about the train passing. I don't remember whether we stopped that train or whether we decided that there was no readings in that area.

I don't think we made a decision to allow trains. I don't remember anymore whether we called and said, no trains. The wind was blowing in the other direction at that time, to the west.

Q Do you know if that is part of your emergency plan to notify Conrail or to get in contact with the dispatcher of Conrail?

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A I think this is a defined call. I don't remember. It is something we have done in the drills; that is part of it; the Coast Guard is part of it, and the airport is part of it. We actually run drills and make the calls and I can't remember this morning who would have made the call, and when it was made.

It is very possible and probable that the call got made. We have run emergency drills in the past, and we have discussed action relative to trains and so forth. I don't remember the emergency plan saying stop trains, as a defined step in there.

MS. GOLDFRANK: Off the record.

(Discussion off the record.)

MS. GOLDFRANK: I would like to request that we be provided with copies of the logs showing who was called that morning pursuant to an emergency plan.

A Some of the notifications in that plan are required by outside agencies. I called the Civil Defense, and they are supposed to call three people. We generally call them. It could be contained in someone else's call too.

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Q On the morning of March 28th at

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11:04, the Unit 2 ventilation was turned off.

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Who made that decision?

5

A I believe during the morning or somewhere

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about that time, I think Jack and I were involved

7

in discussions, and I think Jack was involved in

8

discussions with other people relative to turning

9

off the Unit 2 ventilation.

10

I had agreed to turn it off, is the best

11

way I can remember it, and it didn't stay off

12

very long.

13

Q Why was that decision made to turn it

14

off?

15

A I think people thought we could minimize the

16

release.

17

Q Is that what Mr. Herbein indicated

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to you?

19

A That is what I remember. That is hard

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to remember specifically. I think him and I may

21

have talked about that. He may have talked to,

22

maybe, Dick Dubiel about it, or maybe somebody

23

in Unit 1. I can't remember, but I eventually

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agreed to turn it off, and in a very short time,

25

if I remember right, the ventilation -- and we had



1  
2 been on the respirator, and I didn't think it  
3 would have been effective because the wind was  
4 fairly blowing, and it would still have been  
5 released. So it was just a matter of when it  
6 would build up to be released.

7 Q Who was consulted when you decided  
8 to turn that ventilation back on?

9 A I don't -- I think Dick Dubiel had come to  
10 me. I can't remember. But I think Dick Dubiel  
11 came to me and made a recommendation to turn it on,  
12 and I decided to turn it on without consulting  
13 anyone.

14 Q Do you know what the basis of this  
15 recommendation was?

16 A The basis was that it wouldn't help, and  
17 the fact that it would be filtered and would  
18 minimize the exposure of our own people.

19 Q Were you aware of an NRC concern  
20 with respect to turning the ventilation off?

21 A I may have been at the time, but I can't  
22 remember it now. I think there were discussions  
23 on ventilation outside of me prior to it being  
24 turned off. I was aware there were discussions,  
25 and just that if it had to finally get turned

1  
2 that it would have to come through me.

3 Q Did you have discussions with NRC  
4 concerning turning off the ventilation?

5 A I don't remember.

6 Q Do you know if Mr. Herbein had those  
7 discussions?

8 A I don't remember specifically, but I think  
9 Dick Dubiel might have.

10 Q Did Dick Dubiel indicate to you  
11 any concern that the NRC discussed?

12 A Not that I know.

13 Q Do you remember whether or not  
14 Mr. Dubiel indicated to you that there was a  
15 concern about the Unit 2 ventilation causing  
16 ground level releases?

17 A No, I don't. The best I can remember is  
18 that I am pretty sure that Dick Dubiel was the  
19 man that wanted to turn it back on, and I would  
20 have gone with his recommendation. He understood  
21 the wind conditions, and understood plume, and  
22 that sort of thing, and I would have gone with  
23 that. The other thing was that at that same  
24 time frame, we evacuated the Emergency Control  
25 Center to Unit 2 control. I am not sure of the

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sequence, but I think we were concerned with the

3

on-site people more than anything else.

4

Q Did you authorize an auxiliary operator

5

to enter the auxiliary building to increase core

6

flood tank pressure?

7

A Do you know when that was? Was it in the

8

morning sometime?

9

Q It was at 9:00 P.M. on March 28th.

10

A I don't remember being involved in that.

11

Q You were not consulted at all concerning

12

that?

13

A I couldn't honestly say I wasn't consulted.

14

I don't remember any discussion on it right now

15

that we had.

16

Q Do you know who would have authorized

17

the auxiliary operator to enter the building?

18

A It would basically have been Dick Dubiel

19

and Mike Ross that would have been involved, or

20

someone they designated.

21

Q You do not remember being consulted?

22

A I don't remember discussing core flood tanks

23

at 9:00 that night; that was after the pump had

24

been started, and I don't remember worrying about it.

25

Q Why did the vent header leak?

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2 A Why?

3 Q Yes.

4 A I don't have a good answer to that.

5 Q Is it supposed to leak?

6 A No, it is not supposed to leak, but the vent  
7 header system is a pretty extensive system in  
8 either unit, and connects a lot of tanks together,  
9 and has a lot of check valves, and has a potential  
10 for leakage.

11 Secondly, I think in Unit 2 there are relief  
12 valves on the vent header on some of those lines  
13 that go straight into the upstream of the filters.

14 It is a complicated system in a lot of rooms  
15 in the auxiliary building that has a good  
16 susceptibility to leakage even in ideal conditions.

17 Q You were aware prior to March 28th  
18 that they leaked?

19 A No.

20 Q Who would be responsible for the  
21 maintenance of that?

22 A The vent header system would have been part  
23 of the test program, but I don't believe it was  
24 a safety system; it still would have been part of  
25 the Acceptance Test Program, and the maintenance

1900 283

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2 of that system would have been the responsibility  
3 of the Maintenance Department underneath the  
4 superintendent.

5 Q That would have been Mr. Shovlin's  
6 department?

7 A Mr. Shovlin. Mr. Logan would have been  
8 responsible for priorities as far as if they  
9 were identified work items on the system, then  
10 he would have been responsible to assure that  
11 those items were scheduled on the plan of the  
12 day to make sure maintenance did those items.

13 Q Do you know if the Maintenance  
14 Program incorporates surveillance of the vent  
15 header?

16 A I don't believe there is any surveillance  
17 on the vent header. I don't believe there is  
18 surveillance in either unit on the vent header.  
19 I would have to go back. I don't believe it is  
20 a tech spec system, and other than in the normal  
21 generic type tests that you run on a piping  
22 system, I don't believe there was a normal  
23 surveillance done on it.

24 Q You became aware on the afternoon of  
25 the 29th that the vent header did leak?

1900 284

1  
2 A I really can't remember exactly, but it is  
3 sometime in that time frame we were aware there  
4 was a leak. I think we knew there was a leak in  
5 the makeup tank room, but with the radiation  
6 levels we had seen, I think it was hard for us  
7 to tell what the difference between water on the  
8 floor being evaporated and the leak was.

9 Sometime in those first three days, we  
10 did worry about trying to correlate venting the  
11 makeup tank to increase level of radiation.

12 Q How did the fact that there was a  
13 leak in the vent header affect your decision-making  
14 process?

15 A On the 28th, I don't believe it did.

16 Q On the 29th?

17 A On the 29th and the 30th. I have a very  
18 hard time separating those two days or any other  
19 day after that, to be honest with you. I think  
20 it affected us insofar as the waste gas system,  
21 and how we operated the makeup tank insofar as  
22 the pressure we carry on it.

23 We never really carry pressure on the makeup,  
24 with some hydrogen of 20 to 30 pounds. I think we  
25 were aware in those next two days after the 28th that



1  
2 we were degassifying by letting down, and I think  
3 our operational plan on the makeup tank was  
4 influenced by the leak in the vent area, and we  
5 didn't want an additional release.

6 Q On the afternoon of March 29th a  
7 reactor coolant sample was taken.

8 A What date?

9 Q March 29th. Who authorized the taking  
10 of that sample?

11 A It is just very hard to specifically remember,  
12 but I think I had taken the daylight shift, or  
13 whatever you call it, the one after the 14-hour day  
14 which had daylight in it, and I think I was here.  
15 I think the sample was -- I think we decided we  
16 had to take the sample. I think the decision for  
17 that came out of the Observation Center Command  
18 Room.

19 The authorization within the plant and  
20 preparation was probably between me and Jim  
21 Seelinger on down to the people who work for us.  
22 So when you say who authorized the taking of the  
23 sample, I think the decision to take the sample  
24 was made outside of the plant.

25 Q Who would have made that decision?

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A That would have come to me from Jack Herbein but I was aware he was dealing with some other people at the Observation Center.

Q What type of radiological controls were in effect when that individual went in to take that sample?

A Was that sample taken by Bill Pickley, do you know?

Q Is he the radiation chemistry foreman?

A No, that is Ed Hauser. I can't remember the exact precautions. We did take precautions relative to trying to plan out his time in there and his exact evolutions to make it minimum, and it was a respirator, and that sort of thing, but I can't remember the specific precautions, but that would have been from the Health Physics foreman, or Dick Dubiel.

I think it was Dick Dubiel or Tom Malavey that were involved with some of the details.

Q When you indicated that somebody should go down to get a reactor coolant sample, you did not specify what radiological controls should be effective?

A I don't believe that is the right context,

1 and I don't remember exactly, but I am sure that  
2 we knew that we were -- we were aware that it  
3 was going to be a high level, and my direction  
4 would have been that we had to take radiological  
5 precautions, but the specifics I would have  
6 left to Dick Dubiel and Tom Malavey.  
7

8 I would have wanted to minimize the exposure  
9 of the guy. We didn't disagree that the sample was  
10 needed for part of the evaluation, but I would have  
11 wanted him to dry run it, but I just don't remember  
12 the conversations.

13 When I say "dry run," I mean that the man  
14 practices with his hands everything outside there  
15 so he could minimize his exposure.

16 Q Did you indicate that to Mr. Herbein?

17 A I don't remember indicating that sort of  
18 thing to Mr. Herbein, but I think -- I don't remember  
19 specific conversations, but I know that we were  
20 aware that we were in an abnormal radioactivity  
21 situation. Internally that would probably have  
22 come from him to me, but I don't remember.

23 Q Were you on-site at 11:00 P.M. on  
24 March 29th?

25 A I don't think so, but I don't remember.

1  
2 Q You indicated that you had the  
3 daylight shift.

4 A The hard part I have is remembering when  
5 I came in on the 29th. I think I had the 6 o'clock  
6 to 6 o'clock on daylight, and if I remember,  
7 Jim Seelinger and I went six to six or seven to  
8 seven, and I can't remember if I was here at 11  
9 that night.

10 Q You and Mr. Seelinger alternated  
11 duty shifts on Unit 2?

12 A Late on the 28th when we started setting up  
13 to have essentially two teams, so we could have  
14 people in and out of here, and work essentially  
15 12-13 hours shifts.

16 At the same time, Jack was setting up his  
17 group at the Observation Center, I was designating  
18 on-site -- between Jim Seelinger and I on the  
19 28th, and probably Ross and Dubiel and Logan,  
20 we probably agreed on an organization that would  
21 fill all of the functions we had up there. We had  
22 to have an emergency director. We had to have a  
23 guy in charge of the Emergency Control Center,  
24 and all the functions in the emergency plan  
25 because we were still in it, and that was the

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on-site organization.

Q With respect to the on-site organization, when you were on-site you would be emergency director, and when you were not on-site Mr. Seelinger would be the emergency director?

A Yes.

Q Why was Mr. Logan not made the alternate emergency director?

A To me, you mean?

Q To you.

A I made that decision, and made Joe Logan and Jim Seelinger aware of it. My basis was that I felt Jim Seelinger had more familiarity with the plant. He had been involved with that more than Logan had.

Logan had just taken over Unit 2 in January and had never really run an emergency drill, although I had him watch the drills in 1978 when he was in training.

I felt that Jim was more qualified at that time as emergency director.

When we went up to three shifts, Joe did end up being one of the three.

The judgment I made was that Seelinger, of the

1900 290-

three of us, was number two. Seelinger had Unit 2 experience and a Unit 2 license, and I didn't, so the choice was made on who knew the most on the emergency plan, I believe.

Q Why was the alternate of who was emergency director during that first week on-site not between Mr. Seelinger and Mr. Logan?

A As opposed to?

Q Mr. Seelinger and you.

A I did not consider removing myself as emergency director, and I was not requested to do so by Mr. Herbein.

I essentially was under Herbein's direction that night, and I made him aware of my organization. He eventually wanted to put me out of there, but at first he did not want to, and I didn't -- I felt that that was part of my responsibility.

Q On March 30th, the NRC expressed concerns with respect to access controls, exposure control, and effluent monitoring. What action was taken as a result of the NRC's concerns with the Radiation Protection Program?

A What was the last thing, effluent monitoring?

Q Yes.

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A You mean, environmental monitoring or effluent monitoring?

Q Effluent monitoring.

A That specific I don't remem'er. I do remember discussing radiation protection cautions with people, but not by name, at the NRC. I think we tried to go out and establish -- we tried to take our paper system, and tried to use it again to the degree we could, and to take our controls and begin to re-establish control points for items such as that; that is the kind of thing I remember us vaguely trying to do. We were still controlling all entrances on the site at that time. We had essentially total accountability and total control of people coming through the gate.

We had constant on-site monitoring going on, monitoring between the buildings, and that is the kind of program I remember.

My direction to Dick Dubiel was that we make sure that each guy that went into the auxiliary building was briefed. By Friday we were trying to implement more formal controls.

Q Who was in charge of instituting controls as to who went in and out of the auxiliary

1900 292

1  
2 building, for instance?

3 A The organization we designated had an  
4 operations component which would have had a shift  
5 supervisor and operations supervisor and had  
6 the Health Physics guy, Dick Dubiel at the  
7 Emergency Control Center -- it was mainly between  
8 the Operations and Health Physics operations  
9 because they had the most familiarity with  
10 location, and they could determine need and health  
11 physics from the standpoint of whether or not  
12 there should be -- what the consequences of  
13 entering buildings was, and also the clothing,  
14 respirators, that sort of thing.

15 Q Did you indicate to the people in  
16 charge of the operations side that they should  
17 not enter a building without first contacting  
18 somebody from Health Physics?

19 A To my memory, that is the way my direction  
20 was. From my position in the control room,  
21 I would have forced the operations people to  
22 talk to the Health Physics people before they  
23 entered any HPI area. I can't guarantee that 1900 295  
24 any operator that wanted to go somewhere took  
25 that direction, but I am sure that direction was out.

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Q You specifically gave that direction to the individual who was at the head of the operations side?

A I can't remember too many specifics questions on the 29th or 30th. I know that even on the 28th in the discussions I was involved, for instance the ones that I can remember being involved on entrance to auxiliary buildings, for evaluating oil pumps for reactor coolant pumps, I specifically had Dick Dubiel brief those people and check them out, and in fact he helped them dress, and that was the way the direction was.

I am sure that was clear to the operations guy working for me.

Q On March 30th, what was your role in the decision to vent the makeup tank?

A On March 30th, by the time I got to the site, I believe the venting of the makeup tank was underway. I was called. I came into my formal office which had been taken over by some consultants, stopped by there, and I got a phone call, I believe, from either a shift supervisor or Mike Ross, that there was something occurring in the control room and that I ought to get up there. I can't remember

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1 who called me.

3 I proceeded to the control room sometime,  
4 I think, around 7:30, but I could be off on the  
5 time.

6 Time is something that is very poor for  
7 me to remember from the memory bank, and when I  
8 got to the control room, I think Bill Zewe was  
9 there. I am not sure if Greg Hitz was there.  
10 Bill Zewe was there, and I think Jim Floyd was  
11 there, and they were in the middle of the venting  
12 of the makeup tank, and I don't remember too many  
13 of the events except that I was assured that they  
14 were on the phone with the State, and I think  
15 there was a helicopter overhead at that time,  
16 and by that time I can't remember the pressure,  
17 but we had decided somewhere after that to not  
18 let the pressure build up in the makeup tank,  
19 which it had built up during the night, apparently.

20 Q Was Mr. Seelinger directing Jim Floyd  
21 at that point with respect to venting the makeup  
22 tank?

23 A I don't remember. I don't think so. I have  
24 subsequently read things which makes it hard to  
25 remember what I knew then. I read, for instance, what

1  
2 Jim Floyd told the State, and I wasn't aware of  
3 that when I went -- I wasn't aware of that  
4 testimony before the State, that he made the call  
5 to the Civil Defense and protection people.

6 I was not aware of it that morning that he  
7 made that call.

8 Q That would have been Mr. Seelinger's  
9 shift though since you were not on?

10 A That is true. I don't know where everyone  
11 was physically at that morning.

12 Q When you go to the Unit 2 control room,  
13 Mr. Seelinger was there?

14 A I don't remember.

15 Q Do you remember if Jim Floyd was there?

16 A I remember Jim Floyd being there, and I  
17 think I remember Bill Zewe and Greg Hitz was there.

18 Q What did Mr. Floyd indicate to you  
19 as being the information that he received from the  
20 State on the phone at that point?

21 A He didn't -- I don't remember him indicating  
22 that.

23 Q Do you know that he was on the phone?

24 A I said, in subsequent testimony that I have  
25 heard and read, that he contacted the State that



1  
2 morning sometime in the early morning about this,  
3 and I was not aware of it that morning. I talked  
4 more to Bill Zewe than to Floyd at the time.

5 Q Mr. Floyd was not on the phone when  
6 you went into the control room?

7 A Not that I remember.

8 Q What was the role of the emergency  
9 director during that period when you would alternate  
10 with Mr. Seelinger?

11 A Basically, the emergency director was carrying  
12 out -- was the senior guy on-site, but he was  
13 under the direction of Jack at the Observation Center.

14 Q What was the emergency director's  
15 responsibilities?

16 A Still in the emergency plan, and still  
17 responsible to carry out the duties in the emergency  
18 plan, and to coordinate the overall operation in  
19 concert with the direction that was coming from  
20 the Observation Center.

21 Q Would the actions that occurred while  
22 either you or Mr. Seelinger were on shift as  
23 emergency director have to receive your approval?

24 A Actions in the plant would have to receive  
25 our approval unless it was an emergency condition



1  
2 where the shift supervisor or the licensed guy  
3 would take action and tell you what he did.  
4 Additionally, you know, we were responsible to  
5 inform the Observation Center of actions taken,  
6 and preferably before we took any action.

7 By that time, I remember we had 24-hour-a-day  
8 coverage with the senior people, and the direction  
9 was coming from over there, and plus assembling a  
10 large group of people, I wasn't aware of -- I used  
11 to stop by on the way in and out and talk to  
12 Jack, and getting briefed.

13 Q Was venting the makeup tank an emergency  
14 action?

15 A It is hard to separate the logic between  
16 what I knew then and what I know now about then.

17 I think that morning I arrived up there, that  
18 was an emergency action because I was aware of, which  
19 was a lifted relief valve in the makeup suction,  
20 which I think was relieving the reserve storage  
21 tank to the bleed tanks, which would have taken  
22 some water supply, so then in that vein I thought  
23 it was an emergency action to decrease the pressure  
24 in the makeup tank. At that time we were sensitive  
25 to how much water we had in the big tank. We had

1  
2 taken action in the middle of the 28th to get  
3 alternate sources of water in case the reactor  
4 coolant pumps stopped, so that would be one of the  
5 alternates to pump water through.

6 Q What was your role in venting of the  
7 waste gas decay tank?

8 A I was involved in some of it on-site.

9 You mean, of the venting of the tank in the  
10 reactor building?

11 Q Yes.

12 A Jim Seelfinger and I both had a role in the  
13 planning and execution of installing the line and  
14 controlling the vent. We had to get agreement  
15 from the Observation Center, and we had to generate,  
16 or procedures had to be approved by quite a few  
17 people before we did, and it was changed several  
18 times.

19 Q Who would have had to approve that  
20 action?

21 A I can't remember the sequence in time but  
22 we worked our way up to 11 signatures by about the  
23 fourth or fifth day.

24 Q Do you remember who at Metropolitan  
25 Edison?

1  
2 A That would have been a normal plant review  
3 committee plus a superintendent which could have  
4 been me, Seelinger, or Logan, plus the NRC, and  
5 I think NRR, Dick Dubiel from the Health Physics  
6 standpoint, and I can't remember all of them, but  
7 I know we worked our way up to quite a few  
8 approvals to do something like that.

9 That would have also been reviewed by the  
10 technical group at the Observations Center, or  
11 someone they sent over.

12 Q Was that action at your initiation?

13 A I think that action was from management,  
14 management being the group at the Observation Center.  
15 I think the kind -- I don't remember a specific  
16 person saying, you have to have the signatures.  
17 I think if any group from the NRC up to the State  
18 insisted on approving something, we ended up  
19 concurring with that and putting them down.

20 Q Was the decision to vent the waste-decay  
21 tank a decision generated by you?

22 A No, I think that decision was generated  
23 by the Advisory Group at the Observation Center.  
24 We were in agreement with that at the plant. We  
25 wanted to do that because we wanted to get more room.

1  
2 We were at 80 some pounds, and we eventually  
3 knew that we were going to be with a limited  
4 system plus we were aware, I think, that there  
5 was hydrogen in the tank, and we were glad to  
6 vent it.

7 For instance, on the review of that  
8 procedure to put it in the building, we had a  
9 guy in our outfit in engineering who was an  
10 expert on hydrogen, so that was -- plus the  
11 tests for the rig and test of the line, and  
12 that kind of thing.

13 Q Prior to March 28th, were you aware  
14 that either the PORV or the code safeties were  
15 leaking?

16 A Yes.

1900 301

17 Q Since when had you been aware that  
18 they were leaking?

19 A I had been aware probably since February,  
20 is my best guess, that there was minor leakage.  
21 I wasn't aware of the leak rate. I think we  
22 thought the code valves were probably leaking  
23 versus the electromatic, but I don't think we  
24 could be sure. I was aware that last year Unit 1  
25 had a leak in the electromatic, and we had a

1  
2 consistency of leakage. In Unit 2, if you go back  
3 to the initial design, and at our staff's  
4 urging, and a lot of it was mine, to put in a  
5 system in Unit 2 called a leakage control system  
6 to accommodate leakage to within the tech spec  
7 value.

8 Q You became aware that there was a  
9 leak in February, correct?

10 A Maybe before that. On the status sheet we  
11 talked about yesterday, that I used to get in  
12 the morning the-temperatures on that sheet are  
13 the discharge temperatures on the electromatic  
14 and two code reliefs, and I would have been aware  
15 that there was some leakage.

16 Q The first time you can remember being  
17 aware was from the status report, and that was  
18 sometime in February ?

1900 302

19 A I think so. It could have been before that.  
20 I was aware of it before the 28th. I was aware  
21 we were planning, or we were looking for parts,  
22 and I was aware of it to that degree. I know Joe  
23 Logan was talking about it in the POD, and Jack  
24 and I may have talked about it.

25 Q When were you planning on repairing

1

2

the valve?

3

A I think we were to do a leak rate test

4

every day or every shift probably, and it

5

probably would have been repaired if the leakage

6

got severe by calculation beyond the tech spec

7

value, and we were planning to repair on the

8

first outage if we had the parts, and I think

9

we were expediting the parts.

10

I think we had a problem finding parts.

11

I don't know whether we had a problem with parts

12

for the code relief or -- I think we thought the

13

code relief was leaking.

14

Q You thought one of the code safeties

15

was leaking in the PORV?

16

A I am not sure whether two of them were leaking

17

or the codes were. But the temperatures were

18

within 10 degrees, with a range of 185 to 195, and

19

it is pretty hard from that data to tell, but

20

the B prior to the 28th was the higher value, but

21

not by that much.

1900 303

22

Q Did you ever shut the isolation valve

23

to see if the PORV was leaking?

24

A George Kunder and Joe Logan might have done

25

that. I wasn't aware, that I can remember, that



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they had done tests like that.

Q Did you instruct them to perform that?

A I don't remember telling them to perform that test. That doesn't mean that Joe didn't tell them to do it. I am sure Joe was aware of the leakage, and looking at it, and I wasn't pressing him on what he was doing.

The numbers I could remember were very low, as far as the number of gallons a minute. I also could say that I, subsequent to the incident, have gone back and looked at some of the data, so I am contaminated, but I knew about the leakage, but not following it that closely, not as much as the reactor flow problem or the reactor coolant. The Unit 1 operated with some leakage, to my knowledge, not any greater than that, but you can't compare it, and did work on Unit 1 valve on the outage this year.

Q Who made the decision to evacuate workers from the plant?

1900 304

A I believe I made that decision. It could have been Jim Seelinger and me agreeing, but it was me that was responsible for that decision. I wanted everybody off the Island sometime early

1  
2 in the morning because the Island was where the  
3 radiation levels were the highest. I think  
4 Jim Seelinger and I had people searching the  
5 building, and had Dan Shovlin decide who he  
6 needed to keep, and Mike Ross would have arranged  
7 operator relief.

8 Sometime around noon, I think, we released  
9 everybody out of the Observation Center, and  
10 early in the morning we had decided to get  
11 everybody off-site, and then we decided to  
12 release everybody and send them home.

13 Q On what basis did you decide to  
14 evacuate the workers?

15 A Because I think Dubiel and I had talked ---  
16 the wind was shifting and to the point where it  
17 wasn't blowing, and we knew the relief was  
18 accumulating, would accumulate on-site, and  
19 reading four or five assembly areas, we were  
20 afraid we would lose control over the areas,  
21 and with time going by that fast, and we might  
22 accumulate exposure unnecessarily, and so we  
23 removed everybody to the Observation Center  
24 just to minimize their exposure.

1900 305

25 Q You made this decision after

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conferring with Mr. Dubiel and Mr. Seelinger?

A Yes.

Q Did you confer with anybody else?

A Not that I remember. I know it was one of our concerns, or one of your normal concerns when you have your emergency drills, to read those areas and get them out. You have radiation monitors in those areas just for that reason.

Q Who made the decision to evacuate women and children in a five-mile radius of the Island?

A To my knowledge, the Governor made that decision. I was inside the plant most of the time those first couple of days, so I wasn't aware of the stuff that the radio was putting out. I wasn't aware of the local news, even.

Q Were you consulted in that decision?

A Not that I remember.

Q Do you know who at Metropolitan Edison was consulted?

1900 306

A I do not know. There were times in the control room in the time frame of the 29th and the 30th, during those three days after the accident

1  
2 when there were at times people's wives or relatives  
3 who would call in, and there would be rumors of  
4 evacuation around here, and we would talk to  
5 the NRC people in the control room and try  
6 to figure out who was making the recommendation,  
7 but we would hear that from people's wives or  
8 the guys coming back into the control room from  
9 being off -- we would hear it from them.

10 Q Who was the Duty Section head on  
11 March 28th, that morning?

12 A I don't remember.

13 Q Who would have contacted whoever was  
14 the Duty Section head?

15 A The shift supervisor, with the number of  
16 senior people that were present from 5 o'clock or  
17 6 o'clock on, the Duty Sections and the Admins are  
18 set up for the minimum number of people you can  
19 have on, and the shift supervisor would designate,  
20 and that morning we had the shift supervisor get  
21 people in and that morning we were here.

22 Q Initially, early that morning, why  
23 was Mr. Kunder contacted? 1900 307

24 A I really don't personally know that answer.  
25 I think that engineers were here in Unit 1, the

1  
2 nuclear engineers because Unit 1 was at a phase  
3 where it would need some support for the Test  
4 Program to go back up, and I think one of them  
5 called up -- Bill Zewe might have called. He  
6 could have been the Duty Section head too, but  
7 I don't remember. He also lives within walking  
8 distance to the plant.

9 Q Who set up the Duty Section organization.

10 A The Duty Section organization is covered by  
11 one of our administrative procedures, and I  
12 think it was probably me that signs out the memo,  
13 but it could have been one of the superintendents,  
14 but I think it is me that signs out the memo,  
15 and this is the Duty Section, and this is the  
16 Duty Section schedule. It could have been out  
17 of each superintendent. We were somewhere between.

18 One time we had a Duty Section in each unit,  
19 and we were trying to go to a Station Duty Section.  
20 We could get to a minimum rotation, and I don't  
21 remember exactly where we were on that.

22 Q You are not sure if at that point in  
23 time you had a Station Duty head or Unit Duty head?

24 A I think we still have a Unit Duty Section, and  
25 we were planning, or we were trying to go to a five-

1 section Station Duty Section so you could end up  
2 with a lesser commitment of people's time for  
3 just the normal things that occurred with respect  
4 to getting calls on the weekends and on odd hours.  
5

6 I don't think we got to that point. It  
7 could have been each superintendent could have had  
8 his own internal duty roster. I generally was  
9 not on that though, but just available at all times.

10 Q Was that roster set out in the  
11 administrative procedure?

12 A I believe it is. If it isn't set out there  
13 then the requirement to promulgate it in writing is.

14 Q Do you know if the administrative  
15 procedure sets out who should be the Duty head, if  
16 not by name, then by position?

17 A I don't remember. I can't remember the words,  
18 but our agreement and my guidance to the superin-  
19 tendents it would have had to have been some senior  
20 experienced person, you know, but I don't remember  
21 specific guides.

22 Q Would it have to be a senior licensed  
23 person, somebody holding a senior reactor operator's  
24 license?

25 A I don't believe it has to be an SRO licensed

1900 309



1  
2 person. A shift supervisor calls them, as I remember  
3 it, and it would be more having the ability to  
4 have all disciplines available and covered from  
5 Maintenance, Operations, Health Physics, and all  
6 the groups, so you could man up with people in all  
7 categories.

8 A licensed guy is already on duty.

9 Q What was the purpose of setting up  
10 a Duty Section head?

11 A When we originally designed it and wrote  
12 an administrative procedure, I think it was to  
13 assure that we could have the capability to  
14 get on-site promptly enough people to implement  
15 like the emergency plan, or to have enough people  
16 when the unit had the problem to provide additional  
17 supervisory support in all areas.

18 And also the Plant Operations Review  
19 Committee aspect of it, and in order to have  
20 enough engineers on call to cover your disciplines.

21 Q How as the criteria of having somebody  
22 from the PORC connected with having a Duty Section  
23 head?

24 A I think there is also a duty roster, and  
25 I think there is also a PORC section duty schedule.

1900 310

1  
2 I think there was at that time. I think there  
3 was both.

4 Q So there would be a requirement that  
5 there be a Duty Section head and also somebody  
6 from the PORC called?

7 A There had to be the ability to have the  
8 PORC convened either by phone or here pretty  
9 quickly at all times.

10 Q Was that also set out in an administra-  
11 tive procedure?

12 A I believe so. I know the memo was signed  
13 out. I feel sure that there was an official memo  
14 designating who was on duty in which area.

15 Q There was a memo?

16 A There was a memo that stated what the Duty  
17 Sections and what the PORC Sections were, and I  
18 don't remember whether A, B and C or 1, 2 and 3,  
19 and then there was a weekly schedule as to who  
20 had the duty from Thursday to Thursday, or something  
21 like that.

22 Q Who was responsible for putting out  
23 that weekly schedule?

1900 311

24 A The unit superintendents.

25 Q Who did the memo come from?

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A The Unit superintendents -- it could have  
come from the technical superintendents.

He was the PORC chairman in some cases.

MS. GOLDFRANK: I request that we be  
provided with copies of the memos that  
came from the unit superintendents setting  
up the Duty Section organization for the  
years 1978 and 1979.

Off the record.

(Discussion off the record.)

(Continued on next page.)

1900 312

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Q Had Mr. Shovlin served as Duty

3

Section head?

4

A He did in the past. I am not sure he still was on March 28th. He would have had something to do with who in maintenance was designated.

6

7

If, for instance, John McGarry worked for him,

8

he might have been Duty Section head. I would

9

have to go back and look, but he could have been.

10

He used to be. I just don't remember specifically

11

if he was on March 28th.

12

Q Why was the automatic start feature

13

of the emergency deisels disabled on the 28th?

14

A I don't remember when I was made aware that

15

that was true. I don't remember being aware of

16

it very early in the morning. I knew about it

17

afterwards.

18

Q Do you know why?

19

A No.

20

Q When you did become aware, what

21

did you do, when you found that information out?

22

A I didn't find it out until way afterwards.

23

I don't remember being aware of that on the 28th.

24

Q When did you find out about it?

25

A Sometime in the last month or two. 1900 313

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My first knowledge of that was, I think,  
through discussions, with interviews.

Q Through the NRC?

A Yes, through some of the people that were  
interviewed discussing that.

Q So you were not aware of it until June  
or July?

A Maybe earlier than that, when the NRC was  
here. It could have been as early as May or June.

Q Why were core flood tanks isolated?

A On the 28th?

Q Yes, on the 28th.

A That I have also heard discussed. When  
we decided to talk about going on to the core flood  
tanks on the 28th, I remember no discussion where  
we had to un-isolate them. I didn't ever remember  
them being isolated, and if they were isolated,  
I was never involved with it.

Secondly, I don't remember discussion to  
un-isolate, and I knew they were un-isolated when  
we went -- they showed a response to a decrease in  
pressure.

1900 314

Q What was your role in the decision  
to depressurize the plant in order to use the

1

2

core flood tanks?

3

A My role was the same role I described

4

earlier of the group that I discussed -- Lee Rogers,

5

Mike Ross, Jim Seelinger, Joe Logan, George Kunder

6

and Gary Miller and Dick Dubiel from the radiation

7

end. We discussed that item in the morning,

8

and I approved the decision to do that. It was

9

a group essentially consensus.

10

Q Do you remember the substance of that

11

discussion?

12

A Some of it involves -- I don't remember the

13

substance. We had pumped water in, and we put in

14

an appreciable amount from our storage tank. We

15

won't be able to run pump -- or didn't think we

16

would be able to. Part of it involved a discussion

17

of total assurance that the call was being covered

18

by HPI, and I definitely felt that if the core

19

had appreciable -- had a level that was appreciably

20

low, that if we could get low enough we could see --

21

we would be seeing an appreciable influx of water

22

from the lower flood tank.

1900 315

23

In other words, if we saw them dump all the

24

water into the vessel, we would have thought the

25

vessel was pretty empty. We also knew they came in



1  
2 through a separate line into the core area.

3 That is the only part of substance I can  
4 remember. I think in our minds we hoped  
5 eventually that would be a step toward lower  
6 pressure. We were still thinking that the  
7 decay heat was a possibility. At that time we  
8 were just pumping water with the high pressure  
9 injection pumps.

10 My biggest single concern was eventually  
11 borated water storage tank would be pumped out,  
12 and we would have to go into a mode where you take  
13 a section in the reactor building floor with one  
14 pump and cross-connect to a suction on another  
15 pump and come back in.

16 None of us wanted to do that unless we  
17 had to. We just felt it meant more equipment  
18 operation, and it was not the optimum mode to  
19 circulate water in.

20 That is as good as I can remember.

21 Q If the system was solid, why did  
22 you think that the reactor coolant pressure  
23 was decreasing?

24 A The system wasn't solid. We knew it wasn't  
25 solid. The system -- we knew that somewhere in the

1900 316

1 early hours, the first two hours, I believe we  
2 again tried a reactor coolant pump and got  
3 100 amps current, which meant that the pump was  
4 pumping or turning uncoupled or just turning  
5 without a load, which meant it wasn't pumping  
6 water. We were aware there was a steam phase in  
7 the hot legs pretty early.  
8

9 Q Why were you concerned with the  
10 pressurizer level?

11 A Very early in the morning before I arrived  
12 at the plant, I was concerned with pressurizer level.  
13 I wasn't so concerned with it after that because  
14 it didn't indicate -- once we understood, once  
15 I understood, and I didn't understand pressurizer  
16 level before seven in the morning -- I did understand  
17 we had a void in the system after that.

18 Pressurizer level didn't indicate anything  
19 to me.

20 Q At what point did you understand that?

21 A I think I understood that somewhere between  
22 7:30 and 8:30, when we tried to run the pump and  
23 got the 100 amps. I realized the system was in a  
24 condition which was at low level of inventory.

25 Q Since March 28th, what have your

1  
2 responsibilities been with respect to recovery after  
3 that initial week that you and Mr. Seelinger  
4 alternated as emergency directors?

5 A For a while we stayed on shift and went to a  
6 3-shift setup.

7 Then following that I worked directly for Jack.  
8 His desire was to get me off shift, and I came  
9 off shift first of the senior people and worked  
10 directly for him and did whatever I was involved  
11 with, helping with his direction of the operation,  
12 you know, involved in the communication between  
13 the Observation Center and here.

14 And, after that, I spent most of the time  
15 getting ready for this sort of question and answer  
16 for a while.

17 Q What were your responsibilities  
18 working directly for Mr. Herbein?

19 A As senior -- he brought, following the first  
20 week of this, he brought all of the managers out  
21 here and assigned us things to do based on what was  
22 needed that day.

23 He might assign me to go check on a specific  
24 procedure that we needed or resolve problems that  
25 he had.

1900 318

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I spent time at the Observation Center, went to the plan-of-the day over there and helped come back over here and implement some of those actions.

Q In the last week or so your responsibilities have been changed?

A In the last week or so we have officially -- not officially -- we have designated more or less -- implemented organization we're going to have to go with from this time forward.

I was aware back in June, somewhere in late June, that the organization was going to change.

That change essentially involves increasing the number of people involved with Three Mile Island and our company, senior people, from about 75 to maybe 200 and some.

As far as Forked River, which was the primary purpose before the 28th, Three Mile Island is now the primary purpose of the organization. We have integrated organization. We have integrated, meaning that GPU Service organization, project organization and our organization -- "ours." meaning Generation -- were integrated and are being integrated, and I am a part of that.

1900 319

1  
2 Q How did your specific responsibilities  
3 change as a result of that?

4 A In my area they have taken most of the functions  
5 of Three Mile Island and divided them up in  
6 that organization.

7 I report directly to Jack, along with Joe  
8 Logan and Jim Seelinger, Joe Colwitz and the managers.

9 My particular role is now I have Health  
10 Physics, Security and about six or seven other  
11 areas.

12 Seelinger has just Unit 1. Logan has just  
13 Unit 2. As I call it, the operational side, not  
14 the waste management side. The idea of that with  
15 the organization from mainly the Unit 1 standpoint  
16 is to allow Seelinger's concentration strictly on  
17 operations with a minimum of dilution with any  
18 other activity.

19 I will pick up some of that. The managers  
20 will pick up some of that. Maintenance I think  
21 now reports to Arnold through Bachofer, not to  
22 Herbein.

23 We have divided the whole organization on the  
24 Island up amongst all the managers available. 1900 320

25 Q And Mr. Herbein is located on the Island

1  
2 indefinitely now?

3 A To my knowledge he is here for a while. I  
4 don't know about "indefinitely" he is here for a  
5 significant period of time. I think Arnold is  
6 here, but he may also be located at Mountain Lakes  
7 part of the time.

8 MS. GOLDFANK: I would like to mark  
9 as Miller Deposition Exhibit 115 something  
10 entitled, "Operating Philosophy at Three  
11 Mile Island."

12 (Document described above was marked  
13 Miller Deposition Exhibit 115 for identification,  
14 as of this date.)

15 Q Would you look at what we have marked  
16 as Miller Deposition Exhibit 115 and identify  
17 that, please.

18 A That is a presentation that I made at the  
19 B&W seminar in, I believe, March of '78, which  
20 was held at Hershey, Pennsylvania.

21 One part of that is not here, and that was  
22 Jim O'Hanlon, who is Unit 1 superintendent, also  
23 gave a discussion paper on refueling at that  
24 same meeting. That is in a book form and that  
25 is part of it. Mine and his are the total of that



1  
2 book.

3 I described the users meeting to you.  
4 One of the things that occurred is an operating  
5 seminar at a different plant. This year it was  
6 at Three Mile Island. In 1978 it was at Three  
7 Mile Island.

8 Q This was simply a presentation that  
9 you made at a B&W operating seminar?

10 A B&W-sponsored operating seminar, similar to  
11 the users meeting, but not a users meeting.

12 In other words, each year one of the plants  
13 hosts the group, and B&W sponsored it. I am not  
14 sure the words are right, but that is essentially  
15 what happens. That was held at Hershey, and we  
16 were the sponsoring plant. I wrote that. I  
17 personally wrote that.

18 Q And this is the presentation that  
19 you made?

20 A Yes.

21 Q At that meeting?

22 A Yes.

1900 322

23 Q What is the purpose of those operating  
24 seminars?

25 A I think it is a communication device similar

1  
2 to a users meeting, an opportunity to go see  
3 another plant and discuss things. It is a once-a-year  
4 thing. Also B&W makes commercial presentations.

5 Q Each year a different plant has  
6 sponsored this seminar?

7 A Yes.

8 I believe this has been at SMUD, at Arkansas  
9 and I believe it was at Crystal River this year.

10 Q And actually this would be a seminar  
11 sponsored by B&W but hosted by various utilities?

12 A I believe it is sponsored by B&W but hosted  
13 by a particular utility each year.

14 Q Does B&W make a presentation at these?

15 A Yes. When you earlier today asked for users'  
16 files, there actually were four books that were  
17 presented at that meeting on different subjects.

18 MS. GOLDFRANK: I request that we  
19 be provided with copies of any material  
20 relating to the B&W Users Group.

21 THE WITNESS: You will get this part  
22 of it. In my file they are the same. You  
23 also get some of the presentations that  
24 were made in other years that I have.

25 MR. YUSPEH: Off the record.

BENJAMIN REPORTING SERVICE

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(Discussion off the record.)

3

Q Can you look at what we have previously

4

marked as Kunder Deposition Exhibit 88.

5

This is the February 28, 1979 letter from

6

a Mr. Moore with a copy to you. Would you look at

7

the last page.

8

A Jim Moore is with GPU. I don't know his

9

title, but he is a senior engineer.

10

Q Would you look at the last page. You

11

can see that a copy of that was sent to you?

12

A Yes, me and Logan.

13

Q Can you please look through that letter?

14

A September of 1976?

15

Q No, not the first part of that exhibit,

16

but this letter which I believe is a letter to

17

Burns & Roe from Mr. Moore. Do you remember

18

receiving a copy of that?

19

A I don't remember the details of the letter.

20

I believe I remember what it resulted from. I

21

think it results from the Commercial Review Board

22

and the discussions about the inadequacies of

23

the water systems we were talking about. I think

24

GPU was trying to get ahead of this in Forked River

25

because of our concerns which were pretty-well voiced

1  
2 on the L.A. water treatment. That is all I can  
3 remember.

4 Q Do you remember if prior to that  
5 there had been any other similar documents generated  
6 with respect to lessons learned from TMI 2  
7 construction to apply to Forked River.

8 A I don't believe Met Ed issued any.

9 I think I was aware that GPU had issued  
10 some of those lessons learned from their test  
11 program documentation at the startup of the  
12 systems.

13 Other than the stuff that resulted from the  
14 Commercial Review Board, I don't remember any other  
15 transmissions.

16 Q There were transmissions from the  
17 Commercial Review Board?

18 A I think this resulted really from that  
19 discussion. If you go back far enough, it may  
20 not be documented, but I think the concerns  
21 expressed in some of the letters as coming from  
22 that concern developed here on that.

23 Q And, as far as you know, this is the  
24 only one that resulted from discussions in the  
25 Commercial Review Board?

1900 325

1  
2 A I doubt it was the only one. I would say  
3 it is one. I am not sure how that got generated.  
4 I am not sure unless you could show me -- I am  
5 not sure how it got implemented.

6 Q You don't remember seeing any other  
7 formal documents similar to this?

8 A I don't. I may have been aware that  
9 George was involved in some discussions with  
10 GPU Engineering to derive any experience we had,  
11 but I don't remember specifics.

12 If I remember rightly, somebody on the  
13 committee for Forked River -- and it may have  
14 been Bill Sawyer, who quit, and I'm not sure  
15 who picked it up after that -- it may have been  
16 George Kunder, but somebody was going to help  
17 them make a review of TMI 2. That is the only  
18 thing I can remember. But I don't remember  
19 being involved with George, other than trying  
20 to make sure that they got some participation  
21 out of us.

22 Q How at Three Mile Island do you  
23 respond to 10 CFR Part 50 with respect to  
24 quality inspection carried out by those other  
25 than the particular individuals who perform that

1900 326

1  
2 activity?

3 A Number one, Quality Control and Quality  
4 Assurance report to a manager not in the line  
5 organization. That is the way you assure some  
6 independence.

7 Secondly, the Operation Quality Assurance  
8 Plan in the document that we have that implements  
9 10 CFR 50. There may be some Generation procedures  
10 that further implement those requirements that I'm  
11 not aware of that are specific, but the OQA Plan --  
12 there is an Audit Program behind it that is not  
13 part of my responsibility.

14 Q So that Quality Assurance inspections,  
15 actually the responsibilities of inspection  
16 surveillance of 10 CFR Part 50, the OQA Plan  
17 designates how those are fulfilled in each of the  
18 criteria?

19 A There is 18 or 19 criteria -- procurement --  
20 and each one has an implementing set of procedures.  
21 The master document that I am aware of is the  
22 OQA Plan, Operational Quality Assurance Plan.

23 Q That would be the responsibility of  
24 Mr. Troffer?

25 A Manager of Quality Assurance and Licensing

1900 327



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2

has been Mr. Troffer.

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Quality Control has a Quality Control supervisor who is on the Island, Mr. Mackey, who reports to Mr. Troffer. That has changed since the 28th, too.

Q Between January 1, 1979 and March 28, 1979, how many times were you in the Unit 2 Reactor Building D Rings?

A In the first three months?

Q From January 1st to March 28th.

A Inside the D Rings?

Q Yes.

A I can't remember, but no more than once or twice. I know it is not more than once or twice if at all. It could be zero.

Q Do you remember a particular circumstance in which you were there?

A No.

Q Between January 1st and March 28, 1979, how many times were you in the Unit 2 auxiliary building at 280 feet?

1900 328

A Probably I was in there a couple of times, possibly passing through, but not frequently. I don't remember going down to look at anything

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specific, but I would have passed through that area at times going between the units.

During the week I used to try to tour the unit, and at times I would include the auxiliary building in both units.

Q Since March 28th you have made numerous statements to various entities concerning the incident of March 28th. You have prepared a statement that we have marked as Miller Deposition Exhibit 114 that you prepared on May 7, 1979 concerning the March 28th incident, a statement that you submitted to the President's Commission, correct?

A Yes. I think I stated, but I prepared it earlier than that date. I was asked during the hearings when I had prepared it, versus the date, and I said that I prepared it actually earlier than that, but it was basically the document prepared within the first month.

I happened to sign off on the conclusion on that date, but I prepared it earlier than that.

When you say I made statements to various entities, I made statements to various entities upon request to be questioned. I have not gone out

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on my own to say anything.

Q You also testified before the President's Commission on May 31, 1979?

A Yes.

Q You were interviewed by the NRC on May 7, 1979. Were you interviewed by them at any other time?

A I think that I was interviewed one time before that when Joe Logan was there. I don't think I was interviewed. I think I was interviewed three times by them, once with Joe Logan and once by myself and with their operational people, and once with their radiological people, although the last two I just can't remember. I was interviewed earlier with Joe Logan and initially when their investigative team came out.

Q Did they tape the interviews?

A They taped all the interviews to my knowledge.

Q Were you provided with transcripts of these interviews?

1900 330

A I think the company has transcripts of all. They have tapes. I don't think I have transcripts of any of the interviews. I don't believe they were given. If so, I have forgotten. I was given tapes

1  
2 at the time.

3 MR. YUSPEH: Not all of them have  
4 been transcribed. Some have and some haven't.

5 THE WITNESS: But I have the tapes.

6 MS. GOLDFRANK: We have a copy of the  
7 May 7, 1979 interview with NRC. If transcripts  
8 have been made of the other interviews, I  
9 request we be provided with copies of those.

10 MR. YUSPEH: Of course.

11 Q You also were interviewed on April 12th,  
12 along with Dick Dubiel and Jim Seelinger by the  
13 TMI staff, John Hilbish and Bob Long.

14 A Bob Long is GPU.

15 Q Were you interviewed by them at any  
16 other time or anybody else from Met Ed or GPU?

17 A Any interview I have had they have. I don't  
18 remember.

19 Q Do you remember if there was  
20 another interview?

21 A I don't remember, but I could be wrong.  
22 There could be more because there are so many  
23 to keep track of.

24 MR. YUSPEH: The company has a  
25 log of such interviews and we will consult it.

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MS. GOLDFRANK: If there was another interview we request it be provided with a transcript of that.

THE WITNESS: There is nothing that I have which has any prohibition as far as being obtainable.

Q You also testified before the Udall Committee, right?

A If I remember right, I informally talked to them one time and testified another time.

Q Have you, aside from the NRC, President's Commission, Met Ed or GPU Management and the Udall Committee, have you made any other statements?

A Anything I have done you have got.

MR. YUSPEH: Yes.

1900 332

THE WITNESS: I have a folder that lists them, but it is the same as you have. It is the index. The only other thing that I can remember -- and I don't want there to be any question about anything I have being available, or anything I have done -- but when this statement was prepared, it was prepared after I sat down with five or six

1 people that I designated as senior people,  
2  
3 sometime after the incident.

4 This document was prepared by me  
5 after we sat down and submitted it to them  
6 to see if they had any problem with it.

7 Q If you have made statements to  
8 other organizations, we would request we be  
9 provided with copies.

10 MR. YUSPEH: Of course, if there are  
11 any other statements, they will be provided.

12 (Discussion off the record.)

13 THE WITNESS: I can't find anything  
14 in there.

1900 333

15 (Discussion off the record.)

16 THE WITNESS: That statement is a  
17 result of me sitting down with these people  
18 at some time within the first or second  
19 week. That was sent to all those people  
20 that were involved, basically the command  
21 team as I called them in there, and it  
22 was my attempt to write something down  
23 before it got totally away from us because  
24 no one else had written anything down that  
25 I knew of.



1  
2 Q And in writing this, Exhibit 114,  
3 you discussed what you were putting into this  
4 statement with Mr. Seelinger, Mr. Dubiel,  
5 Mr. Ross?

6 A We sat down in a room and tried to trace  
7 our way through the day, I think. Then I tried  
8 to write down the best recollection I had. I  
9 think I said in here it was written from the  
10 best recall of the logic and actions of the day  
11 of the group and myself and that group.

12 I sent this to them after I wrote it, in  
13 addition to that, and said, "Hey, if you have a  
14 problem with this, or you disagree, say so and  
15 do what you want with it."

16 MR. YUSPEH: Did anybody say anything?

17 THE WITNESS: No, not substantively.

18 There may have been minor things, typing  
19 things. I don't remember any issues.

20 Q And Mr. Seelinger, Mr. Ross, Mr. Dubiel,  
21 Mr. Logan and Mr. Rogers sat down with you?

22 A I think Mr. Kunder did too.

23 Q Anybody else?

24 A That is the whole list.

25 Q And were there other drafts of this

1900 334

1  
2 statement?

3 A There were other drafts of that statement.

4 Q Do you have copies of those drafts?

5 A Yes. I said that at the Presidential  
6 Commission in testimony, too, I believe.

7 Q Did you provide the commission with  
8 the drafts?

9 A I agreed to provide them to the transcript,  
10 I think we did, but I can't personally testify  
11 that that happened.

12 MS. GOLDFRANK: We would like to be  
13 provided with the drafts of Mr. Miller's  
14 statement that we have marked as Deposition  
15 Exhibit 114.

16 MR. YUSPEH: Sure, if they have not  
17 already been provided.

18 Q Approximately when did you prepare this?  
19 Was that sometime in April?

20 A I think it was April 14th that I started to  
21 prepar it. It was a Saturday, I believe.

22 MS. GOLDFRANK: At this time I would  
23 like to recess your deposition. I have no  
24 further questions at the moment.

25 I don't anticipate that we will

1  
2 call you back for further questioning, but  
3 it is possible that at a future date we  
4 would have more questions and, if so, we will  
5 arrange, through your attorney, to continue  
6 this deposition. Thank you.

7 (Whereupon the deposition was  
8 adjourned at 3:15 P.M.)  
9

10 -----  
11 GARY PAUL MILLER  
12

13 Subscribed and sworn to before me  
14 this \_\_\_\_\_ day of \_\_\_\_\_ 1979.  
15

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17 NOTARY PUBLIC  
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## I N D E X

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## E X H I B I T S

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9	<u>FOR IDENTIFICATION</u>	<u>PAGE</u>
10	111 Document entitled "Three Mile Island Nuclear Station, GPU startup Problem Report, GPU No. 2940, attached to a November 14, 1977 memo to Gary Miller and Jim Seelinger from J. A. Brummer and Michael Ross	163
14	112 Report of the Review Board for the Determination of Technical and Organizational Readiness for Placing Three Mile Island Unit 2 into Commercial Operation, dated October 26, 1978	180
18	113 Document relating to Mr. Miller's statement to the Presidential Commission	236
20	114 30-page statement by Gary Miller for his testimony before the Presidential Commission	237
22	115 Document entitled, "Operating Philosophy at Three Mile Island"	332

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2 STATE OF NEW YORK )  
3 ) ss.:  
4 COUNTY OF NEW YORK )

5 We, ROBERT ZERKIN, Notary Public, and  
6 STANLEY RUDBARG, Certified Shorthand Reporter  
7 and Notary Public, of the State of New York, do  
8 hereby certify that the foregoing continued  
9 deposition of METROPOLITAN EDISON COMPANY, by  
10 GARY PAUL MILLER, was taken before us on the  
11 8th day of August 1979.

12 The said witness was previously duly  
13 sworn. The said testimony was taken stenographi-  
14 cally by ourselves and then transcribed.

15 The within transcript is a true record of  
16 the said continued deposition.

17 We are not related by blood or marriage to  
18 any of the said parties nor interested directly  
19 or indirectly in the matter in controversy, nor  
20 are we in the employ of any of the counsel.

21 IN WITNESS WHEREOF, we have hereunto  
22 set our hands this 10<sup>th</sup> day of August 1979.

23 *Robert F. Zerk*  
ROBERT ZERKIN

24 *Stanley Rudbarg*  
STANLEY RUDBARG, CSR.

25 1900 338 -