

*Section 2-2
made on p. 27
A*

FW

POOR ORIGINAL

IN THE MATTER OF:

THREE MILE ISLAND
SPECIAL INQUIRY DEPOSITION

DEPOSITION OF: CHARLES O. GALLINA

Place - KING OF PRUSSIA, PA.

Date - SEPTEMBER 14, 1979

Pages 1 - 116

Telephone:
(202) 347-3700

ACE - FEDERAL REPORTERS, INC.

Official Reporters

444 North Capitol Street
Washington, D.C. 20001

NATIONWIDE COVERAGE - DAILY

~~8001280650~~ 8001280650 T

NUCLEAR REGULATORY COMMISSION

SPECIAL INQUIRY GROUP

King of Prussia, PA
September 14, 1979

Deposition of CHARLES O. GALLINA, held in the offices of the Nuclear Regulatory Commission, Region I, 631 Park Avenue, King of Prussia, Pennsylvania, at 9:00 a.m., on the above date, before Michael H. Stephany, a Registered Professional Reporter of the Commonwealth of Pennsylvania.

SPECIAL INQUIRY GROUP MEMBERS:

GEORGE T. FRAMPTON, JR., ESQ.

GEORGE RIVENBARK

PETER SICILIA, JR.

ROBERT BERNERO

FOSTER

COURT REPORTING SERVICE, INC.
1800 ARCHITECTS BLDG. - 117 S. 17TH ST.
PHILADELPHIA, PA. 19103
(215) 567-2670

1 MR. FRAMPTON: This is a deposition
2 being conducted by the U.S. Nuclear Regulatory
3 Commission's Special Inquiry Group on Three
4 Mile Island on September 14, 1979 at King of
5 Prussia, Pennsylvania of Dr. Charles Gallina,
6 who is with the NRC's office of Inspection
7 Enforcement, Region I.

8 Present, in addition to Mr. Gallina
9 are Mr. Robert Bernero, Mr. George Rivenbark,
10 Mr. Peter Sicilia and myself, George Frampton.

11 MR. BERNERO: Dr. Gallina, you had
12 a telephone call to arrange this deposition
13 from Mr. Rogovin asking you to appear here today.

14 I have been authorized by the Nuclear
15 Regulatory Commission, through our staff direc-
16 tor, to take your oath for this deposition.

17 Would you please raise your right hand?

18 CHARLES O. GALLINA, after having been
19 first duly sworn, was examined and testified as
20 follows:

21 BY MR. FRAMPTON:

22 Q Dr. Gallina, you received a letter from Mr.
23 Rogovin describing the purpose of this interview
24 and certain of the aspects of the possibility of
25 attending and your rights in connection with the

1 circumstance?

2 A. I did.

3 Q And did you read and understand that letter?

4 A. Yes, I did.

5 Q As I told you before we went on the record,
6 we do have the benefit of your prior testimony and
7 we will therefore try not to cover matters which were
8 raised there simply for the purpose of saying that
9 we ourselves asked you the same questions.

10 I believe you were interviewed on one
11 occasion, May 7, 1979 by the Inspectors who were
12 conducting the accident investigation into the Three
13 Mile Island accident; is that right?

14 A. I believe that's correct, yes.

15 Q You were also deposed on two occasions last month
16 by the President's Commission Staff?

17 A. That's correct.

18 Q Is that correct?

19 A. That's correct.

20 Q Have you had a chance to review the transcripts
21 of those interviews?

22 A. I have not had a chance to review the transcript
23 of the deposition given on August 16. That has not
24 been forwarded to me as of this time.

25 Q That was the second President's Commission

1 interview?

2 A. Correct.

3 Q. But you have reviewed the transcript of the first
4 deposition in the I and E interviews?

5 A. Yes, I have.

6 Q. Was that testimony substantially accurate?

7 A. Yes, it was.

8 BY MR. BERNERO:

9 Q. Dr. Gallina, I'd like to go into a detailed line
10 of questioning, now, and if you would be patient,
11 I think it is constructive if we just reconstruct
12 sort of the chronology for setting, just to refresh
13 our memories.

14 When were you first informed of the
15 TMI emergency?

16 A. I was first informed at approximately -- I
17 believe it was between 8:00 and 8:15 the morning of
18 March 28, 1979.

19 Q. Did you then go directly to the Region I Incident
20 Response Center?

21 A. Yes, I did.

22 Q. When did you leave for the site?

23 A. At approximately 8:45, I believe, we departed
24 the Region I office for the Three Mile Island site.

25 Q. And you arrived at the site shortly after

1 10:00 a.m.; did you not?

2 A. Right. We arrived at the front gate at approxi-
3 mately 10:00 and we were in the Shift Supervisor's
4 Office in Unit 1 at approximately 10:05.

5 Q. Is it correct, then, that you stationed yourself
6 at the Unit 1 Shift Supervisor's Office?

7 A. During the first two days, yes, that was my
8 duty station.

9 Q. At what time did you leave the site to brief
10 the Lieutenant Governor and then the Governor that
11 evening?

12 A. I think we left the site at approximately 7
13 o'clock, because we had to be checked out at the
14 Observation Center. We left the Observation Center,
15 I believe around 8:00 or 8:30 -- I am not sure of
16 the exact time, now.

17 Q. You were at the capital, the Governor's Mansion
18 in the course of those briefings and the press con-
19 ference? About what time did you finish there in
20 Harrisburg?

21 A. We left the Governor's Mansion shortly after
22 midnight. That would be the 29th.

23 Q. Then you went to your motel to sleep?

24 A. Yes.

25 Q. The next day at what time were you back on site?

1 A. Approximately 8 0'clock in the morning.

2 Q. Again, you stayed at the Unit 1 Supervisor's
3 Office?

4 A. Yes.

5 Q. On Thursday, when did you go to the capital?

6 A. Approximately -- I think we left around 2:30 to
7 3:00, in that area.

8 Q. When you finished there, did you go again to your
9 motel from the capital?

10 A. Yes, we did.

11 Q. On Friday, when did you arrive on site?

12 A. Approximately 8 0'clock.

13 Q. 8:00 a.m., that is?

14 A. Yes.

15 Q. Was that the pattern, the chronology, for your
16 attendance on site through the weekend, then?

17 A. Yes. We would -- because of the changeover
18 we'd try and get there a little earlier, so by site,
19 I am saying physically present in the control room --
20 it would be around 8 0'clock.

21 Q. But you were no longer going to briefings at
22 the capital?

23 A. No.

24 Q. On Friday, Saturday -- Saturday and Sunday?

25 A. Friday, Saturday and Sunday, the remainder of the

1 time there were no further briefings.

2 Q Now, I'd like to go back over this with some
3 administrative questions.

4 At 8:00 a.m. on Wednesday the 28th --
5 this is the very first day of the accident -- 8:00
6 or 8:15 when you heard of the accident, did anyone
7 here in Region I appoint you to head the first team
8 to the site?

9 A No.

10 Q How did you come to be the lead individual in
11 that team?

12 A Okay. Of the five members that were assigned
13 on that team, Don Neeley was appointed as the team
14 leader. My job or assignment at the time was to go
15 as emergency planning officer slash investigator,
16 in other words, to make sure that they got there
17 with the proper equipment and that the Emergency
18 Planning aspects were operating smoothly rather than
19 being the team leader.

20 When we got there and Don Neeley and
21 Jim Higgins were assigned to Unit 2, we sort of lost
22 contact with them for a while and I assumed the duties
23 of team leader out of the Unit 1.

24 Q They were back there in mask, in Unit 2, at
25 that time?

1 A. Right.

2 Q. Well, was Neeley then selected by the management
3 here?

4 A. Right. George Smith designated Don Neeley as
5 the Team Leader.

6 Q. In what role was George Smith making that designa-
7 tion? Was he acting as an emergency director or
8 was he the duty officer or what? Are you aware?

9 A. Well, I guess he and Eldon Brunner were the two
10 that received the initial information from the site
11 and I guess Eldon acted from the operations stand-
12 point, George from the Health-Physics standpoint and
13 George took command and designated Don.

14 Q. Were the other four members of the team select-
15 ed -- well, by difference it would be three other
16 members of the team still to be accounted for. Were
17 they selected by Smith and Brunner?

18 A. I guess the other members were selected by Smith.
19 Brunner selected Jim Higgins to lead the operations
20 and George Smith selected Carl Plumlee and Ron
21 Nimitz as Health-Physicists.

22 Q. Did you have any hand in the selection of the
23 people?

24 A. No.

25 Q. Did anyone give you instructions on what to do

1 at the site?

2 A No. Most of these instructions are what we do
3 as described in our Emergency Plan

4 Q You are familiar with the Emergency Plan, the
5 manual, the Region I Emergency Plan?

6 A Yes.

7 Q Did it strike you at the time or -- no, let
8 me rephrase that.

9 In your opinion or impression, does
10 that Emergency Plan call for the Resident Inspector
11 or the Project Engineer to lead the team to the site?

12 A It does call for the Project Engineer to be the
13 On-Site Inspection Team Leader, yes.

14 Q Now, did this strike you at the time as peculiar;
15 that Haverkamp, who did hold that position or Bill
16 Lazarus, who was his alternate or whatever appendixes
17 on that plan was not designated to go to the site?

18 A It did strike me as being unusual inasmuch as
19 Mr. Haverkamp was present. Eldon Brunner made the
20 decision that he would prefer to have that individual
21 remain here for whatever reason he decided and he
22 does have the prerogative in the Plant to make that
23 decision.

24 Q Did you understand, then, that Neeley was in
25 charge of the NRC activities at the site in some way

1 Team Leader?

2 A. That was my understanding, correct.

3 Q. What functions did you understand were to be
4 performed by the NRC people at the site?

5 A. Well, our general role is basically one of
6 gathering information and evaluating whatever we can
7 and relaying this information back to the Region
8 and the Headquarters. This is how the plan is
9 written. Personally, I didn't believe that's what we
10 would be doing and our plan sort of anticipates that
11 in it says that we can provide radiological assistance
12 if it is needed until the appropriate people arrive,
13 meaning Liscensee people. Our feeling, when we
14 developed the plan -- I am not sure if you are
15 familiar with how this plan developed -- was that
16 although people at the Headquarters level felt our
17 job was just to gather information for relay informa-
18 tion from experience and inspecting these sites
19 for emergency planning, we realized quite early that
20 we would be performing more of assistant's function
21 rather than just an information gathering function,
22 so I was not surprised when we did -- you know --
23 slowly evolve into providing assistance rather than
24 just gathering information.

25 Q. You mean radiological assistance both in technical

1 support and in physically monitoring or sampling?

2 A Well, more of technical support and confirmatory
3 independent measurements.

4 For example, if they needed assistance
5 in search and rescue, we would probably provide
6 our technical expertise to that area, whatever area
7 they may need, technically we would provide assis-
8 tance rather than just standing back and saying --
9 you know -- "You do your thing, we are just here
10 to see that you do it right."

11 Q Would you consider, then, that it would be
12 reasonable for the Regional Office to strongly popu-
13 late the emergency team going to the site with
14 Health-Physicists as against Reactor Inspectors for
15 that reason?

16 A Yes.

17 Q In order to have that strength?

18 A Right.

19 Operationally, a single individual
20 can take whatever information he has and make what-
21 ever evaluations he needs, but on a radiological
22 area it would be where -- you know -- the more people
23 you had, the better off you'd be, so I think the
24 mix was pretty good, initially. There were one
25 Operations Inspector and four Health --

1 Q And four essentially Health-Physicists people?

2 A Right.

3 Q When you got there to the site shortly after
4 10:00, all of you went to the Unit 1 Supervisor's
5 Office?

6 A Right.

7 Q Where Jim Seelinger briefed you on that?

8 A Right.

9 Q Was there then some assignment? Did you or
10 Neeley assign people to go to different places?

11 A Well, being the Team Leader, Don Neeley is the
12 one that made a decision that he and of course Jim
13 Higgins were going to go over to the Unit 2 control
14 room. From that point we did have communications
15 with the Region, so I basically acted as co-ordinator
16 from the Unit 1 control room, getting instructions
17 from the Region as to who would be doing what and
18 providing my own evaluations as to what I had seen.

19 Q Did you then designate tasks for the other
20 Health-Physicists to go out and do on-site and later
21 off-site surveys?

22 A Basically, that came from the Region through
23 me.

24 Q So that the Region was, in essence, saying
25 "Please get an on-site survey," and you would

1 implement that and "Please get an off-site survey"?

2 A. Right.

3 Q Was the Region giving you any instructions about
4 Plant data acquisitions? I don't mean the radiological
5 but the operational at that time? Were they trying
6 to channel that through you?

7 A. No. Plant data information was going, as far
8 as I could understand, to Unit 2 directly, to the
9 Operations Inspector directly.

10 Q Okay.

11 A. If anything, we were providing Region I with
12 information as to plant perimeters as they were re-
13 layed through Unit 1.

14 Q In our co-ordinating role in Unit 1, then, were
15 you evaluating the performance of the NRC radiological
16 team on site, whether we had enough people, whether
17 they had the instruments or equipment they needed?

18 A. Not directly, no. I did make some comments,
19 for example, I requested that the -- I asked where the
20 mobile van was located and requested that it be re-
21 directed to the Three Mile Island site, because I
22 knew that their laboratory was worthless, as far as
23 we were concerned.

24 Q Saturated?

25 A. Right. So, I did make that comment over the

1 phone and they already told me that that had been
2 taken care of and diverted. The main evaluation
3 I was making would be on Licensee data coming in,
4 whether it was meteorological off-site dose rate and
5 I could evaluate that, being that I am experienced
6 with it, and then relay that through the Region.

7 Q Well, we will get to that as a separate body
8 a little bit later.

9 Let's go back to this NRC role.

10 When you got to the site, you said
11 before you are generally familiar with the Region
12 Emergency Plan. When you got to the site, what did
13 you feel the NRC role really was at the outset? How
14 was the Licensee viewing your presence? Was he
15 treating you as an observer?

16 A Well, I wouldn't say necessarily as an observer.
17 They were looking to us for assistance; as a matter
18 of fact, Jim Seelinger came to me directly and said,
19 "Chick, please don't act an inspector. If you see
20 something that we are doing wrong, tell us and we
21 will correct it. In other words, don't just sit there
22 and cite us for anything you see wrong, Tell us.
23 We need your help."

24 Basically he came right out and said
25 that. The feeling I got was that they were in a

1 situation that they had never been in before. They
2 were somewhat apprehensive about it and wanted us to
3 help them out rather than just sit back.

4 Q Did you perceive on their part, a sense, then,
5 that they were afraid that they didn't have a handle
6 on the situation; that they didn't have control of
7 the plant?

8 A I don't think that's a totally correct statement.
9 I felt that they didn't have the reactor in a state
10 that they wanted it to be, but as far as attempting
11 to find out what was going on, that they had their
12 own system was working. In other words, their
13 evaluative system was working okay, but they hadn't
14 come to a conclusion as to where they stood with
15 respect to the Plant.

16 Q Now, at the time you arrived, which is after
17 10:00 a.m., they had their Plant -- I will call it
18 management mechanics well in order? They had all
19 the right engineers and managers and site superinten-
20 dents there; did they not?

21 A Well, I don't -- they had the people that I felt
22 were appropriate there. There were Shift Supervisors
23 and Plant Superintendents were there. As far as from
24 that level up, upper management, I had no idea what
25 they had. That was all Unit 2, so I really didn't

1 know -- yo know -- how that end was going in Unit 1
2 and as far as off-site monitoring was going and the
3 things they were doing in that area, that, I could
4 say, they had the proper people or appeared to have
5 the proper people.

6 Q Well, judging from Sellinger's remarks about
7 looking for assistance and for that matter just looking
8 at the uncertainties that prevailed at the time, did
9 you feel that there might be a need for NRC people
10 on-side literally to direct some operation? In other
11 words, to tell them to do something or to tell them
12 for some major thing not to do it?

13 A At this point in time, no, I didn't get that
14 impression.

15 Q You didn't feel that there would be that
16 challenge put to you there?

17 A No, not at this time.

18 Q Did you think at that time that headquarters
19 understood the level of uncertainty that existed at
20 the site?

21 Did you share, for instance, Sellinger's
22 remarks with the Region? Did you call back and say --
23 you know -- "This Licensee is asking us to go into
24 this mode of assistance?"

25 A Well, I think maybe -- let me clarify what I said

1 before.

2 They did ask for help, but it wasn't
3 a request where they were -- how shall I say --
4 floundering. This was the first time they have ever
5 had to actuate their emergency plan. They felt they
6 were doing it properly, but what they were saying
7 was "Hey, if you see us doing something wrong, tell
8 us about it and have us corrected." In other words,
9 don't just sit back and then three weeks from now come
10 and say "we got you here, we got you there." They
11 were saying "We want to do it right and we thing we
12 are doing it right, but if you see us doing it wrong,
13 let us know. Don't just sit back," that type of
14 thing.

15 Q You indicated earlier that you are familiar with
16 the Region I Emergency Response Plan procedures. Are
17 you initially as familiar with headquarters, the
18 manual chapter and -- or were you, I should say, as
19 familiar with --

20 A Okay. When I first started in the area of
21 Emergency Planning, I, in essence, authored the
22 Region I Emergency Response Plan. Okay?

23 When I was relieved of this collateral
24 duty, approximately two years ago, that was taken over
25 by Dale Donaldson and the two of us together upgraded

1 it to where it stands today.

2 It is my understanding in talking to
3 Dale that the Headquarters Incident Response Plan
4 basically took our Incident Response Plan and modified
5 it, so I would assume that in general I would know how
6 the plan works, but I do not know of it in detail as
7 far as Unit Headquarters level.

8 Q Well, that's one function of interest at the
9 moment.

10 Did you feel that Headquarters would
11 then possibly step into a role of ordering or directing
12 the Licensee to do something as part of their --

13 A I knew that they had the prerogative to do that,
14 but I didn't feel, at that point, that they would
15 be doing it. It was more -- at that early stage of
16 the incident we were gathering more information and
17 headquarters seemed to be centered around the reactor
18 and not on the off-site consequences. That, in-
19 cidentally, came from the Regional Office.

20 Q The interest of off-site --

21 A Right.

22 Q Well, we will get to that off-site as associated
23 with evacuation questions.

24 Let me set that aside and persue the
25 operational side a little bit.

1 Were you in the Unit 1 control room
2 around midday on Wednesday the 28th? Were you aware
3 that NRC Headquarters were asking for data about the
4 incore thermocouples, sometimes called the core
5 exit thermocouples?

6 A. Right.

7 Q. You were aware of that? Did you consider that
8 a high priority request?

9 A. Yes. In other words, some time in that morning --
10 well, from the time we got on site we were in constant
11 communication with the Region. Some time in early
12 afternoon -- I believe it was Kermit Whitt from
13 Headquarters got on the line. We had a three-way
14 conference call going between Headquarters, Region
15 I and the Unit 1 control room. It had not yet
16 transfered over to Unit 2 and the questions I was
17 getting dealt with incore thermocouples. That's
18 one of the questions they wanted to know about and
19 I believe the response we got back once we got the
20 information through a hot line that existed between
21 the two control rooms was that they didn't believe
22 the thermocouples, they thought they were damaged
23 and that their computer was printing out question
24 marks. They really didn't know the exact levels
25 they were looking at.

1 Q Well, the hot way temperature detectors were
2 showing high temperatures, very high --

3 A Right.

4 Q Higher than saturation. Did you or anyone around
5 you, to your knowledge, appreciate at the time that
6 those temperatures were those of steam rather than
7 saturated steam?

8 A I personally didn't appreciate that, not being
9 an engineer, per se. The first indication I had of
10 the seriousness of the problem came when Mr. Stello
11 from Headquarters wanted to talk to somebody from the
12 MET ED staff.

13 Q That was the Stello-Hitz conversation shortly
14 after 4:00 p.m.?

15 A Correct.

16 Q So you were present? You were in the room when
17 Hitz was brought to the phone to talk to Stello?

18 A Yes, I was.

19 Q At the time did you know who Stello was?

20 A Oh, yes.

21 Q You knew what his position was?

22 A Yes.

23 Q Did you think that Hitz knew or that any of the
24 Met Ed people knew who this fellow was?

25 A My feeling at the time was Hitz might not have

1 known. You really couldn't tell because of his
2 Navy background. He answered every question with
3 "Yes, sir."

4 Q That doesn't tell you anything.

5 A I was pretty sure, however, that they were to
6 communicate that message to Unit 2, if it got to --
7 say Mr. Miller or one of the Shift Supervisors or
8 Plant Superintendents over there that they would know
9 who Mr. Stello was. I am pretty certain of that,
10 that if Mr. Miller or say Mr. Herbein, Vice-President,
11 would have received that information, that they would
12 have known who Mr. Stello was.

13 Q Was that conversation on a Speaker Phone?
14 Could you hear what Stello was saying?

15 A At that point, I am not really sure. I don't
16 think it was, but I am not certain because I was
17 hearing one side of the conversation. That is Mr.
18 Hitz.

19 Q You were hearing Hitz?

20 A Right. And, to the best of my recollection,
21 Mr. Hitz wanted to make sure he got the conversation
22 or the message straight and he repeated it. And,
23 as I remember, it was "Those temperatures are high.
24 If they are this high, you have got saturated steam
25 and if you have got saturated steam, the only way

1 you could have got it was if the core was uncovered.
2 We think you should get some water in there."

3 MR. FRAMPTON: Let's go off the record
4 for a minute.

5 (Discussion off the record)

6 BY MR. BERNERO:

7 Q Dr. Gallina, you have before you Exhibit 9,
8 which is a transcript of a NRC Headquarter's Instant
9 Response Center tape taken between 4:00 and 4:30 p.m.
10 on the 28th which transcribes the telephone call which
11 occurred between Mr. Gregory Hitz of MET ED Company
12 and Victor Stello of the NRC. In this conversation,
13 as you can see, Mr. Stello is suggesting to Mr. Hitz
14 that the high, hot log temperatures indicate a super
15 heat condition indicating that the core may be un-
16 covered and the conversation closes with Mr. Hitz
17 saying that he will talk to the people in Unit 2 to
18 pass on this concern of NRC.

19 Do you recall this conversation?

20 A Yes, I do.

21 Q Do you recall what ensued afterward? Did Mr.
22 Hitz go to Unit 2 or call them?

23 A Yes. As soon as this conversation was over Mr.
24 Hitz left the Shift Supervisor's Office and went into
25 the control room in Unit 1 where he picked up what I

1 refer to as the Hotline Phone. It is a black and white
2 telephone which is directly connected to Unit 2. I
3 could observe him because there is a large window in
4 the Shift Supervisor's Office which looks into the
5 control room. He had a conversation with someone on
6 that phone then returned into the Shift Supervisor's
7 Office and I believe he again spoke to Mr. Stello as
8 to what the people on the other end in Unit 2 be-
9 lieved to be the case.

10 Q So then, from your point of view, it appeared that
11 the Plant had heard this suggestion?

12 A Yes.

13 Q Given it consideration and in essence rejected it
14 saying that they did not agree with it?

15 A The impression that I received was that Mr. Hitz
16 informed Management Personnel in Unit 2 control room
17 of Mr. Stello's concerns. When he returned he said
18 that they were -- they had listened to the concerns,
19 they did not believe that the core was uncovered due
20 to the fact that, A, the core flood tanks had injected
21 to some small degree and were not floating on the
22 core -- that's the terminology he used and that they
23 also had a high pressurizer level, both of these
24 situations indicating that they had a full reactor
25 and that the core was not uncovered.

1 Q This conversation, Dr. Gallina, with Stello
2 and Hitz runs somewhat continuously where Hitz
3 raises a few of these points on his own initiative?

4 A Right.

5 Q After he had gone to the hotline and talked to
6 Unit 2, do you know for a fact that he did talk to
7 Stello again or did he just, to your knowledge, talk
8 to NRC Headquarters?

9 A I do not know if it was Mr. Stello. I know it
10 was NRC Headquarters.

11 Q But it was definitely a separate conversation?

12 A Yes, it was. Apparently, as you read this
13 transcript, you can see that Mr. Hitz starts to have
14 some questions that are being raised by Mr. Stello.
15 Apparently after Mr. Hitz got off the phone, whatever
16 questions may have arisen in his mind were also put
17 to rest by the conversation he had with the people
18 in the Unit.

19 Q Well then, from your point of view as the NRC
20 Coordinator standing there and listening to this
21 interview, did you feel that the concern had reached
22 the proper people and the information was flowing
23 as it should flow?

24 A Yes. I felt that it had, based on the conversa-
25 tion I heard between Mr. Hitz and whoever was on the

1 other line, that the concern had been relayed and
2 that -- you know -- the answer had come back.

3 Q Did you feel any need to advise or inform Higgins
4 or Baunack, of the substance of this call? They were,
5 at that time, in the Unit 2 control room, I believe?

6 A Correct. It was my feeling at the time that they
7 were appraised of the situation. It was my understand-
8 ing that they also were talking with Headquarters
9 and I assumed that anything that came through on Unit
10 1 was also coming through on Unit 2.

11 Q Did you personally then have any feeling one way
12 of the other about the adequacy of core cooling at
13 the time?

14 A My personal believe at the time was that core
15 cooling was adequate at this point in time. In my
16 own mind I had invisioned a significant amount of
17 failed fuel but had not invisioned the core being
18 uncovered at any time.

19 Q Are you using the term "failed fuel" in the way
20 we frequently do which means the pins are popped,
21 but fundamentally intact; that the zircalloy cladding
22 is leaking but is structurally intact?

23 A Right. I had -- in other words, I pictured a
24 core in a normal configuration, all the pins in --
25 you know -- in their bundles as one would expect with

1 a high amount of say cracking or pinholes or leaking,
2 whatever you would expect; however, on a much, much
3 larger scale due to the trangeant that the reflector
4 had experienced.

5 Q To your knowledge, did any NRC inspector on site
6 concentrate on the core cooling question at that
7 point and later?

8 A At this point in time, I do not believe so.

9 Q when you left the site, then, about 7:00 p.m.
10 this is when you left to go to the capital for
11 the Lieutenant Governor briefing and so forth?

12 A Right.

13 Q You and Higgins and Neeley were leaving?

14 A Correct.

15 Q Neeley was still, at least in your view, the
16 Team Leader?

17 A Yes.

18 Q You left at about 7 0'clock to go over to the
19 Operations Center for the checkout?

20 A Correct.

21 Q At that time, the reactor coolant pump was not
22 yet running, that one pump that was restarted that
23 night?

24 A I wouldn't know. When I left, the way we broke
25 down the information, I asked -- the call requesting

1 us to go came into the Unit 1 control room and I
2 called over to Unit 2, told them that we had been
3 requested to go to the Governor or Lieutenant Governor's
4 Office for briefing and that they should get what-
5 ever information they could on whatever areas they
6 were looking at before they came over, so at that
7 point in time Mr. Higgins had all the information
8 on the operational end of it.

9 Mr. Neeley had the information on the
10 radiological aspects in Unit 2 and I had all the
11 information on the off-site environmental aspects,
12 and that's how we decided to break it up when we
13 briefed the Governor, so what information Mr. Higgins
14 had at that time, I personally don't know.

15 Q But you were focusing on something else, then?
16 You were not concentrating on that?

17 A Right.

18 Q And [REDACTED] was unable to go with you because
19 of his trousers being radioactive with Xenon?

20 A Correct.

21 Q Getting back to this request to go -- the ques-
22 tion actually came through you in the Unit 1 control
23 room? That request was from a State Official?

24 A Yes.

25 Q Do you recall who that was?

1 A. The name, I cannot remember at this time. He
2 told me he was on the staff from the Governor's
3 staff, apparently; that he talked to Neeley and Higgins
4 during the day earlier and they called me -- well,
5 they called the control room and asked to talk to
6 someone from the NRC and I happened to be the one
7 who talked to them. They requested that -- you
8 know -- the people come over to talk to the Governor.

9 Q. Did you feel, then, at that time, 7 0'clock in
10 the evening, that the NRC group on site, then, was
11 qualified to monitor the Plant operations and the
12 emergency operations effectively, in particular
13 Plant operations? Did you feel that we had the right
14 people there?

15 A. Well, as far as the right people there, yes,
16 I felt we had a -- you know -- correct people.
17 About half-hour after we first arrived, another in-
18 vestigator and another Operations Inspector arrived,
19 so there were two inspectors looking at operations in
20 the Unit; Don Neeley and Ray Smith, who was the other
21 investigator, were also in Unit 2, so when we were
22 leaving, I felt that there were th^e -- the appropriate
23 people were there that would continue to get the infor-
24 mation to Headquarters into Region I.

25 Q. And, at that time, Walt Baunack was still --

1 he was, in essence, staying in Unit 2 control room
2 while Higgins left the site?

3 A. Right.

4 Q. Relieving him?

5 A. Right

6 Q. Did you at that time or did Neeley, to your
7 knowledge, at that time, call for any assistance from
8 the Region, you know, to call for more people, or --

9 A. Well, we had received word from the Region that
10 more people were coming. That came through the normal
11 course of conversation, that Bill Raymond was on his
12 way -- I believe Don Bechman was on his way. I knew
13 that Health-Physics support in the form of some
14 additional inspectors were coming either that night
15 of the following morning.

16 Q. How about Management? Was anything said to you
17 that somebody was coming to take charge or -- you
18 know -- that more senior management was going to show
19 up on the scene?

20 A. Nobody said anything. I personally was surprised
21 that it didn't happen. Once we got to the site on
22 the 28th and saw what the situation was and reported
23 back to the Region, I personally was surprised that
24 more upper management people weren't coming to the
25 site.

1 The senior man, when we were leaving,
2 was a Section Chief and I think there was an
3 additional Section Chief on his way for Operations.

4 Q Back up for a moment.

5 The senior man, when you were leaving
6 the site?

7 A Right, we left the site that night.

8 Q Yes.

9 A Phil Stohr had arrived with the mobile van.

10 Q So he came at about 5 o'clock?

11 A A little later. I think it was 6:30. I believe
12 he arrived at the site and Rick Keimig was also on
13 his way to the site and I believe Ebe McCabe was
14 also on his way to the site.

15 Q Now, you knew these men personally and you knew
16 them to be Section Chiefs?

17 A Yes.

18 Q Here in the normal organizational structure?

19 A Right.

20 Q But did anyone tell you that Phil Stohr or
21 Rick Keimig or Ebe McCabe was going to be the NRC
22 man in charge? Was there any such discussion for
23 emergency response purposes?

24 A Well, I believe Rick Keimig, that rings a bell --
25 was feeling that he was going to take over from the

1 operations standpoint and that Phil Stohr was going
2 to take over from a radiological-environmental stand-
3 point. See, basically, we were talking to two
4 Branch Chiefs most of the day, or their -- you know --
5 not directly, but we could hear them in the back-
6 ground; Brunner, Operations, George Smith, Health-
7 Physics and the information we were getting back from
8 Boyce Grier would be that Rick Keimig would be taking
9 over Operations and Phil Stohr would be taking over
10 Environmental.

11 Q Let's go back to the more personal role you had
12 on the site.

13 Now, on that first day, did you discuss
14 or evaluate the need for evacuation?

15 A On the first day, as far as the general popula-
16 tion was concerned, based on the dose rates we were
17 seeing in the environment, there was no need for
18 evacuation. The site was evacuated, of course, in
19 accordance with the criteria for a site emergency and
20 a general emergency.

21 Q Yes.

22 A But as far as off-site, there was actually no
23 need for evacuation.

24 Q By "evacuation," I do intend the general popula-
25 tion; off-site population.

1 A We looked at that almost immediately, looking
2 at the off-site doses and the dose rates that we were
3 seeing off-site did not warrant the evacuation of the
4 general public.

5 Q You have previously remarked in this discussion
6 that you personally thought the core was being cooled
7 effectively.

8 A Yes.

9 Q And therefore it's fair to say that you didn't
10 think uncertainty about the core cooling was considered
11 in the evacuation decision? Was that mentioned?

12 A No, that never came up. The basic criteria
13 that I was using -- and I believe the Licensee was
14 using at the time was the site boundary and off-site
15 dosees. Our feeling was that if the system were to
16 deteriorate in any way, we would then start seeing
17 increase in these values which would lead us to make
18 a decision that off-site evacuation would be necessary.

19 Q So that when you had discussed the evacuation,
20 you had your personal involvement was with the off-
21 site monitoring evacuation consideration?

22 A That was only personnel. In other words,
23 we never sat down with the Licensee and said, "Should
24 we or should we not?"

25 Q Wasn't the Licensee doing that sort of thing in

1 the Unit 1 control room?

2 A. Yes.

3 Q. You were an observer to the Licensee?

4 A. Yes. They were doing it and I was just observing
5 and agreeing with their decisions, if you were.

6 Q. So then, when you prepared to leave the site
7 with Neeley and Higgings, was there a discussion with
8 your Headquarters in Region I, that is your management
9 to say "We are going to brief the State and this is
10 what we are going to tell them?" Did you discuss, in
11 advance, this?

12 A. We didn't say what we were going to tell them.
13 Boyce Grier talked to me on the telephone. Basically
14 he said, "Chick, tell it like it is. Don't minimize
15 anything and don't exaggerate anything. Just give
16 them the facts as they exist," and that's what we
17 attempted to do.

18 Q. Did someone stand in for you at Unit 1 when you
19 left the site in the same role that you were serving?

20 A. Yes, I am pretty sure. I am not sure who it
21 was, but I believe Ron Nimitz or Carl Plumlee took
22 over. Ray Smith also came over and was then acting
23 in Unit 1 for a while. I am not sure exactly who
24 the phone communicator was when I was gone out of
25 Unit 1.

1 Q But Stohr was on-site?

2 A Stohr was on-site.

3 Q Would you have expected Phil Stohr to designate
4 people or move them around as necessary?

5 A Right.

6 Q Let me go to what the instructions with the
7 Governor were.

8 Could you tell us in your own words,
9 summarize the substance of the advice that you and
10 Higgins gave in the first briefing -- that was to
11 Governor Scranton, wasn't it?

12 A Correct.

13 Q Could you summarize what you told him about the
14 NRC's view of what you had there?

15 A Okay. Basically, the Governor was getting in-
16 formation from three sources; the NRC, DOE, presence
17 of Mr. Robert Friess, who was the Captain of the
18 Radiological Services Program Team that came out of
19 Brookhaven, plus Tom Gerusky, who was the head of
20 the Bureau of RAP Health, Commonwealth of Pennsylvania.
21 Basically Jim Higgins described the system as it
22 existed at that time, mainly the reactor system.

23 We had, as he described it, significant
24 fail fuel. They were somewhat concerned as to how
25 the incident had developed and Jim gave him a summary

1 of that as best we could determine at that point,
2 the feed water pump failing, and things like that.

3 Q Could I interrupt you for a moment?

4 You said that Higgins described it as
5 failed fuel. Was the distinction "failed fuel,"
6 "damaged fuel" discussed in any --

7 A Yes. We went to considerable lengths again to
8 describe to the Governor what we meant by "failed
9 fuel." This is how we described the source of the
10 radioactivity existing in the containment. The failed
11 fuel had let the activity into the cooling system and
12 due to ruptured disc on the pressurizer draining
13 tank, it was in the containment. It was our belief
14 at that time that the pump that had pumped some of the
15 liquid over into the Auxilary Building where the
16 floor drains had backed up was the primary source
17 of off-site activity; that this was being picked up
18 by the ventillation system and exhausted into the
19 environment and at this point in time the Licensee
20 was making every attempt to minimize or stop that
21 release of radioactivity.

22 Q And on the Health-Physics public protection
23 side, how did you --

24 A Well, I described the doses that we were seeing
25 on site and what we had been told was coming in, in

1 other words, the Licensee's reports of off-site
2 radiation. This was confirmed by Tom Gerusky and
3 his people as to what they were seeing off-site
4 and by Bob Freiss and the RAP people who had their
5 helicopters in the area. So, in other words, the
6 Governor got a non-conflicting picture of the off-site
7 dose rate.

8 We tried out best to put it in per-
9 spective for the Governor so that -- you know -- his
10 concern could be properly directed and we felt at
11 that time that based on what we were seeing, we were
12 not overly concerned about the public. It appeared
13 that they were on their way to terminating the release.
14 They thought that he had had it isolated. It was
15 a matter of time, now, before they got the water
16 pumped in the tanks, et cetera, and we felt that the
17 situation was serious. We felt that it was going to
18 take quite a bit of time to -- I won't say correct,
19 but the Governor wanted to know if Unit 2 would be
20 operating again shortly and I told him "No, I didn't
21 think so," just to the extent of the radiation in
22 the auxiliary building, the containment. As a matter
23 of fact, that was one of the quotes that I was
24 quoted in the paper as saying; that is was the most
25 serious accident that I had seen. I didn't believe,

1 because of the depth of it -- again, I didn't foresee
2 an uncovered cover, but because of the extent of it,
3 that there was a massive contamination problem and
4 that it was a very serious incident.

5 Q After the briefing of Lieutenant Governor
6 Scranton, there was a press conference which he called,
7 I believe?

8 A Correct.

9 Q Were you and Higgins at that press conference
10 alone -- NRC, that is? Were you the only NRC people
11 there?

12 A We were the only NRC people there, correct.

13 Q How was that done, that press conference? The
14 Lieutenant Governor made a statement?

15 A The Governor made a statement; Tom Gerusky from
16 Pennsylvania was there, again, Bob Freiss from the
17 Department of Energy, Colonial Henderson from Civil
18 Defense was present and then Jim Higgins and myself
19 from NRC.

20 Q And you responded to questions?

21 A Right.

22 Q Did you feel that you and Higgins or you, yourself
23 in some perhaps leadership role were speaking for the
24 NRC as an agency? Did you understand that you were
25 the spokesmen?

1 A Well, I felt at the time that between the two
2 of us we knew what had transpired during the day and
3 that we were the NRC at that time.

4 Q Okay. After the press conference, you went to
5 the Governor's Mansion?

6 A Correct.

7 Q To see Governor Thornburg.

8 A Correct.

9 Q Was that essentially a replay of the briefing?

10 A To some extent, it was. The Governor -- well,
11 Lieutenant Governor Scranton was more interested
12 in getting an accurate picture of what had happened.
13 I believe MET ED had a very serious credibility
14 problem that day and Lieutenant Governor Scranton
15 was more interested in finding out what really
16 happened. He didn't believe MET ED and their state-
17 ments. The Governor shared that concern but also
18 had a -- for want of a better word -- political
19 overtones in his concern as to what had happened.
20 He listened to what we had said, basically a replay
21 of what we had told the Governor, but he was more
22 concerned with Tom Gerusky and his people; whether
23 they were performing adequately off-site and he got
24 quite upset when Tom told him that he could have done
25 a better job if he had had more people, and that

1 basically he was relying on the NRC for most of his
2 confirmatory measurements with respect to the Licensee.

3 Tom mentioned something about some
4 number, 300,000 or 800,000 dollars that was removed
5 from the budget for this and the Governor was very
6 concerned that he was not the one who had removed
7 it.

8 It got to a political level very
9 rapidly, but the Governor was concerned and we again
10 told him about our belief that it was mainly failed
11 fuel. We didn't believe the core was uncovered,
12 but it was significant failed fuel and it would be
13 a while before the reactor was started.

14 Q In either the briefing to the Governor, the
15 press conference or the briefing to the Governor,
16 to your knowledge, was Higgins aware that the reactor
17 coolant pump was now operating and the system was in
18 that cooling mode?

19 A At that point in time, I don't believe so. If
20 he did, he would have told the Governor, so you'd have
21 to check with him. I don't remember exactly what
22 detail we went into as to how the reactor was being
23 cooled. We didn't feel that the reactor was in a
24 stable condition at that time, so I would think that
25 he would know that the reactor coolant pump was

1 operating.

2 Q Now, when you left the Governor's Mansion,
3 it was shortly after midnight, you said?

4 A Correct.

5 Q Did you communicate with your management in
6 Region I here to give them a playback of what had
7 happened or a debriefing, whatever you would call it?

8 A No, not that night. We were, by that point in
9 time, we were just thoroughly exhausted. We went
10 back to the motel -- I am not sure if Jim said he
11 was going to call, but I know I didn't call Region
12 I or anybody about it. I just hit the sack, at
13 that point.

14 Q Then you returned to the site the following
15 morning? Did you discuss evacuation once again when
16 you got into the site? Did you get a status on it?

17 A No. Well, I got a status from the off-site
18 dose readings and they had improved considerably since
19 the day before and the reason we attributed that to
20 was the fact that they had covered the puddles of
21 water which we believed were the main source of radio-
22 activity, you know, getting out of the plant, covered
23 them with plastic and most of them -- most of the water
24 had been pumped back in the tanks and was off the
25 floor, so the dose rates that we were seeing off-site

1 had dropped significantly.

2 Q And there appeared to be a procedure in place
3 for suppressing the source of release?

4 A They appeared to have gotten a handle on the
5 source of the release and were taking care of it.

6 Q Taking steps on that?

7 At that time, on the 29th, were there
8 any discussions in your presence of the non-conden-
9 sable gas in the system, the bubbles still in the
10 system?

11 A We knew that the bubble was there. we knew
12 the day before that voids had been identified in
13 they system; however, it wasn't until Thursday that
14 the voids were described or discussed as non-
15 condensables as opposed to steam.

16 Q Okay. Then on Thursday the 29th you had to go
17 to the Governor's Office once again?

18 A Right.

19 Q That was earlier this time?

20 A Right.

21 Q Earlier in the day?

22 A Right. It was around 2:00 or 2:30.

23 Q What was the means by which you were told to
24 go again? What happened?

25 A I received the phone calls from Boyce Grier

1 the second meeting and he said that he felt that
2 everything was fine; that we came over very well and
3 we were -- you know -- factual and didn't exaggerate
4 or hold anything back, so he was happy with the press
5 conference that we had the night before.

6 Q Okay. So then on the afternoon of the 29th
7 when you -- this time you went to the Governor
8 directly rather than Lieutenant Governor Scranton
9 first?

10 A Yes. Lieutenant Governor Scranton had arrived
11 at the site on the 29th, was being suited up to get
12 a personal tour of the Auxiliary Building, so we met
13 him there and he again thanked us for coming the
14 night before and we departed and went right to the
15 Governor's Office and just as we were starting, then
16 Lieutenant Governor came in and we briefed them
17 both together before we had a press conference.

18 MR. BERNERO: Off the record.

19 (Discussion off the record)

20 (A short recess was taken at this time)

21 BY MR. BERNERO:

22 Q We were discussing the March 29 contact with
23 the Governor and you went there on the afternoon
24 of the 29th and advised the Governor that -- well,
25 tell me, what was the substance of your advice on

1 Thursday, the 29th?

2 A. Okay. Basically that the main difference on the
3 29th was that the problem appeared to be resolved
4 from the off-site standpoint; that they felt they
5 had discovered the source of the release of the
6 radioactivity; that they were -- you know -- getting
7 it under control and that we had a serious on-site
8 problem, but that it was an on-site problem; that
9 the people really didn't have to worry about any
10 eminent danger because the dose rates off-site were
11 very low.

12 Q. And by "serious on-site problem," did you
13 describe that to the Governor or did Higgins?

14 A. Well, I think either Jim or I tried to say that
15 we had an even more -- again, we used the term
16 "failed fuel," apparently than we thought and based
17 on the dose rates we were seeing inside, because now
18 we are starting to get into the areas that we couldn't
19 see before and we are seeing dose rates of 1,000 per
20 hour in certain areas and the fact was really coming
21 to light how serious the problem was on-site, but,
22 again, because the off-site releases had more or less
23 dropped significantly, we felt that off-site the
24 problem -- you know -- wasn't that serious; that we
25 had a serious on-site problem.

1 Q So at that time you had a knowledge of high
2 radiation fields in the Plant?

3 A Yes.

4 Q Leading you to believe that there was a lot more
5 failed fuel, you were still thinking in terms of
6 failed fuel as against damaged fuel?

7 A I told the Governor myself, I said, "The problem
8 we are having in actually coming up with a number
9 as to how serious the problem is and whether there is
10 any significant-core damage other than failed fuel
11 is the fact that we have not been able to take a
12 primary coolant sample; that this was being attempted
13 now, but until we had those results, we wouldn't be
14 able to know."

15 Q And you and Higgins both, I believe, had testified
16 that you learned of that first sample drawing right
17 after this conference?

18 A Right.

19 Q And you called the Governor's Office?

20 A Right.

21 Q To notify them?

22 A Higgins called and got a hold of the press
23 secretary, I believe, Critshlow and told him -- well,
24 we both felt we had left the Governor with a certain
25 impression and as soon as we heard what the dose rates

1 were off the primary cooling sample, we realized we
2 had something other than failed fuel. We had a
3 damaged core and we called the Governor back im-
4 mediately and informed him of that.

5 Q But at that time the infamous bubble was not
6 in your mind? You knew there were voids in the
7 system?

8 A Right.

9 Q But were you aware of any substantial problem
10 in managing the gas?

11 A No, it wasn't until Friday that I personally
12 became aware of problems they were having with the
13 bubbles and non-condensable gases.

14 Q Now, on the 29th when Dick Vollmer from NRR
15 arrived at the site, was it your understanding that
16 he was to be in charge of all NRC operations at
17 the site, or just --

18 A I never became involved with that. I knew he
19 was coming because Jim Higgins didn't go to the site
20 with me on the morning of the 29th because he was
21 supposed to meet Dick Vollmer and some other people
22 from Licensing. To be honest, the impression I got
23 was that he was up there representing NRR, but I
24 never got the impression that he was in charge of
25 the overall operations there.

1 Q There was no discussion of this with your
2 management?

3 A No.

4 Q And the conversations you were having with
5 Boyce Grier?

6 A As far as I knew at that time the control of
7 the site, as far as I knew, was oscelating between
8 Rick Keimig and Ebe McCabe. In other words, they
9 were relieving each other and they were the ones in
10 charge for IBE. NRR people were coming to the site,
11 basically, I understood to find out what the heck had
12 happened and what was going on, but I never got the
13 feeling on Thursday, the 29th that it was to take
14 charge of the operations.

15 Q Did you discuss with Vollmer or any of his
16 people the coordination of work, or --

17 A I never did, no.

18 Q Do you know if any I & E personnel did do so?

19 A I am not aware. I basically did my job, what-
20 ever that would be, you know, evaluating off-site
21 doses, communicating, coordinating out of Unit 1
22 and I never got into any conversation between Vollmer
23 and NRR.

24 Q From that same administrative point of view,
25 when Denton showed up with that large body of people

1 on Friday, the 30th --

2 A. Then we knew.

3 Q. Then you knew?

4 A. Right.

5 Q. Was Boyce there? Was Boyce there on site at
6 that time?

7 A. On Friday?

8 Q. Yes.

9 A. I believe he arrived some time in the afternoon --
10 late afternoon on Friday. I don't know the exact time.
11 I don't know how he arrived.

12 Q. But when Denton showed up at the site, did
13 someone pass the word to you that Denton is now going
14 to be the --

15 A. We got that word before he arrived on site,
16 right.

17 Q. Okay. You got that word from whom?

18 A. I believe it was someone from the Region, that
19 Harold Denton was on his way and that he would take
20 over, you know, NRC operations at the site and that
21 George Smith and Boyce Grier were leaving from here,
22 also, to go to the site.

23 Q. I'd like to set a time reference here of 9 o'clock
24 in the morning on Friday, March 30. We are know
25 honing in on the evacuation question and the

1 recommendation thereon.

2 So, 9 o'clock in the morning, I am
3 interested in the time before 9 o'clock in the
4 morning --

5 A. Okay.

6 Q. Before that recommendation had broken loose,
7 did you understand what degassing operations were
8 going on in Unit 2?

9 A. Yes.

10 Q. Could you describe, in general terms, what
11 you thought was going on?

12 A. Let me just take a little running start.

13 When I got on-site at 8 o'clock,
14 roughly 8 o'clock on Friday, we had Bill Fisher,
15 who is a Section Chief in Region III was in the
16 Unit 1 control room, plus some additional Health-
17 Physics people from -- not only our office, but
18 others, so I asked permission from Bill if it would
19 be all right to go over to the Unit 2 to see what
20 was going on. I hadn't been there for two days and
21 I wanted to get a feel of what was going on. He
22 said, "Fine."

23 When I got there, I noticed a feeling
24 of concern, I was able to sense it with the MET ED
25 operators so I went over and I talked to Bill Raymond,

1 who is from our office and one or more people from
2 MET ED to ask them what the problem was and then
3 they explained to me at that point in time that they
4 were having trouble with letdown flow and that earlier
5 they had some unexpected release of radioactivity
6 and I asked them "Well, was it terminated?" Because,
7 prior to this time if they had done something and
8 a release occurred, they could just stop whatever they
9 were doing and they explained to me how they were
10 degassing the system or the system was degassing
11 itself through the makeup tank; that everytime
12 any water was taken out through the makeup tank,
13 a lot of gas was being involved. This was causing
14 the tank to over pressurize and in attempting to get
15 some of that gas out of there, they over pressurized
16 the vent head or one or more relief valves had opened
17 and they had this unexpected release that happened
18 around 7 o'clock in the morning, so this is when I
19 first found out about the non-condensable gases.
20 This is when I first found out how they were attempting
21 to degas it at this time. This is before they
22 started using the depressurizer to degas, when they
23 realized they ran into this problem, so I had some
24 understanding of why they had the problem at 7 o'clock,
25 what they were doing to correct it, and how they were

1 going to change their mode of operation to prevent
2 it from happening again.

3 Q So you and several NRC people there were aware
4 of this?

5 A Yes.

6 Q And understood this?

7 A Yes.

8 Q Were you aware of MET ED's attempts to use the
9 waste gas compressor to prevent these releases?

10 A Yes.

11 Q That they were manually starting to --

12 A Manually starting to try to maintain a negative
13 pressure, because -- we all knew that the vent header
14 had leaks and anytime you use it you'd start to
15 see levels increasing in the Auxiliary Building
16 and some of it would be taken through and released
17 off-site. So, I knew that they were attempting to
18 keep that on a negative pressure and that somehow
19 they over pressurized it and at that time they
20 believed that some relief valve somewhere had opened
21 and allowed -- you know -- a release in activity.
22 The actual number never came up, but it was some
23 reason for concern early that morning.

24 At the time that I was there that
25 concern had passed. There main problem was letdown

1 flow. They were losing it for various reasons and
2 they were trying to gain it back.

3 Q Do you know if someone was recounting all this
4 or explaining all this to Headquarters or to the
5 Region at that time, this manipulation of the waste
6 gas system?

7 A Well, I am pretty sure that somebody was. Jim
8 Higgins was there that morning. Bill Raymond was there
9 that morning. I am not sure if Bauneck was -- I
10 think Walt was there, also. Those are the three
11 people I remember and I think Bechman had also
12 arrived so there were at least three or four NRC
13 inspectors in the Unit 2 control room. I am pretty
14 sure that the preliminary -- as a matter of fact,
15 I am sure now, because I know I seen the emergency
16 forms, that I believe around 8:45 somebody did call
17 in the office to say what happened and then the
18 following message form updates would actually give
19 a release path of this activity, so I am pretty sure
20 they were given back to Region I.

21 Q In that context, did you discuss with anyone
22 or consider yourself whether these continuing re-
23 lations, while they are manning that gas, whether you
24 might add up to an off-site dose equal to the EPA
25 protective action guidelines?

1 A Well, we checked that right away. As soon as
2 I got back to Unit 1, my first concern was to go back
3 and see what had happened around 7 o'clock when these
4 releases purportedly occurred, and they were aware
5 that they potentially had a down wind and they had
6 a helicopter in the air and what we are seeing was
7 yes, relatively high levels over the vent, but by the
8 time it got down to ground level they were low and
9 off-site they were minimal, so, based on the pro-
10 jection these things may occur again, but that -- you
11 know -- even at the same levels or less, we saw no
12 reason to --

13 Q You thus saw no extrapolation that would add up.
14 to a REM dose off-site?

15 A Yes, because the way these things were going --
16 if the team would go and measure a point at 29
17 minimum per hour, if they went back five minutes
18 later and they had read nothing, so it was a mandering
19 puff. It was an intermittent-type release. It was
20 a short release. They knew where it was coming from,
21 they were taking actions to either prevent them or
22 minimize them in the future, so we had no concern
23 at all as far as getting up to a -- you know -- a
24 REM exposure to any individual.

25 Q I understand from your previous testimony that

1 you heard of the Headquarter's recommendation on
2 evacuation through an indirect path?

3 A Yes.

4 Q You heard because people came on site saying --

5 A A MET ED employee came on site and was very mad
6 at me. He came in and said, "What the hell is the
7 NRC trying to do?"

8 I said, "What do you mean?"

9 He said, "Well, my wife just called
10 and she is going to take our kids out of school be-
11 cause they heard on the radio that the NRC recommended
12 evacuation."

13 That's the first I heard about it.

14 Q What was your personal reaction to that?

15 A Well, I was very angry. I had been inspecting
16 and in the area of emergency planning for several
17 years and perhaps more acutely aware of what kind
18 of panic you can engender by ordering evacuation
19 due to radiation. It's not like a flood or something
20 where you can see it. This is invisible, odorless,
21 tasteless material and people generally tend to panic
22 when they hear something like this and I realize that
23 there are guidelines where evacuation is considered
24 even before it's implemented and we had, as far as
25 I could see, had no where come near giving anybody

1 a REM exposure, whole body.

2 I called up, using the hotline to
3 Unit 2 and I don't know -- I think it was Bechman.
4 I said, "Hey, has something happened over there that
5 we don't know about here? Has some condition
6 deteriorated to a point where it looks like we are
7 going to lose a waste gas tank or something like that?"

8 He said, "No; as a matter of fact,
9 we are better off than we were an hour ago. We got
10 a letdown flowback and it looks like the releases
11 are going to be minimal from here on in. We are
12 sitting better than we were an hour ago."

13 I said, "Do you know of anybody there
14 recommending evacuation?"

15 When I heard evacuation and NRC, I
16 assumed it came from the site.

17 He said, "Hell no, we don't know any-
18 thing about it here."

19 I then got on the phone to George Smith,
20 Region I, assuming all the time that whenever I talked
21 to George Smith in the Region that directly or in-
22 directly they had some kind of communication with
23 Headquarters.

24 As of late Wednesday, the three-way
25 communication was set up between the Region and Unit

1 2, so I, on Thursday I was talking to the Region,
2 but not to Headquarters concurrently, but I assumed
3 that through here there was some way of doing it and
4 George said he would check it and shortly got back
5 to me and said, "Yes, Doc Collins had called the
6 State and as far as they knew there was no reason."
7 He agreed with my evaluation of the situation, said
8 that they were going to prepare -- or I believe he
9 said -- somehow I got this information they were going
10 to prepare a press release here.

11 Q This is at Region I?

12 A Yes, to be distributed and say that there is no
13 need for evacuation.

14 Then, all of a sudden, I started
15 getting a lot of communications between -- from Boyce
16 Grier asking to track down Jack Hesson, Vice-president
17 of MET ED, Rick Keimig, who was in charge of I & E
18 operations at the site and I knew something was up
19 and then I got a call back from George Smith saying
20 that the decision had been made, that the Commissioners
21 were going to recommend evacuation to the Governor,
22 of pregnant women and pre-school children.

23 I was serious, because I said, "George,
24 there is nothing here, even on-site that is close to
25 giving anybody a REM."

1 I said, "Off-site, we are talking about
2 1 MR, 1.4 MR. We are getting real low numbers."

3 I was very angry.

4 Then, all of a sudden someone says --
5 came into the office and said, "The State wants you
6 on the telephone," so I went outside and it was Bill
7 Dornsife. He is the Nuclear Engineer for the
8 Commonwealth of Pennsylvania.

9 He said, "What the hell is going on?"

10 I said, "Bill, if you guys would
11 promise me a job the way I feel now I'd just take
12 this hat off and walk out of here."

13 That's how mad I was. In my opinion
14 it was just a total mistake. We were violating not
15 only our procedures, we were violating the State's
16 procedures. We were violating the Licensees pro-
17 cedures by having a direct NRC Headquarters to the
18 Governor's Office type -- completely ignoring the
19 technical people on-site and the Commonwealth itself
20 who were all saying -- you know -- "There is no need
21 to evacuate."

22 Q In your discussions with George Smith, you used
23 the comparison to the one REM protective action
24 guidelines; the EPA?

25 A I never mentioned that, per se. All I said was

1 "George, I am looking at all the off-site reports
2 coming in. I have got an overlay sitting in front of
3 me."

4 I said, "There is absolutely no reason
5 that I can see to evacuate off-site."

6 I said, "I have checked with Unit 2.
7 They are in a very stable condition. They have no
8 problems over there, no system is deteriorating;
9 as a matter of fact, they are getting better. They
10 are getting a better handle on the situation now than
11 they had a couple of hours ago."

12 I said, "You could cause a panic."

13 I said, "This can really give you the
14 big problem as far as off-site effects is going to
15 be this evacuation, not the radiation."

16 Q If you could set the clock back for a moment to
17 the Headquarters -- Headquarters obviously had this
18 concern that was inspiring the recommendation for
19 evacuation. What person on-site do you think they
20 should have talked to?

21 A Well, the problem I see, in looking back on this
22 whole thing is that Headquarters concentrated all of
23 its attention to the reactor and consequently to Unit
24 2. They lost sight of the fact that Unit 1 was the
25 emergency control center. This is where the Licensee

1 was coordinating his efforts, not only with the
2 Plant but with off-site and the State. If they had
3 had contacted Unit 1, myself or if they had contacted
4 any MET ED employee or the State itself, we could
5 have talked to the State through Unit 1. This whole
6 thing would have been avoided. I, to this day, don't
7 know how the 1,200 MR reading got to Headquarters, but
8 if they had picked up the right phone -- and I thought
9 when I talked to George, George could talk to
10 Headquarters and this message would have gotten to
11 somebody like Denton or Matson or whoever was involved,
12 but apparently it didn't and that's why when George
13 told me "Chick, there is nothing we can do, it's
14 a management decision, we have to accept it as such
15 and we have got to keep our cool --"

16 Q In your discussion with George Smith, did you
17 discuss the relative urgency or lack of urgency
18 of such a recommendation in light of the facts?
19 In other words --

20 A I said, "We ought to call it back. If it has
21 leaked out already, we have to get that thing called
22 back as soon as we can or we are going to have a
23 real panic situation on our hands," I said, "There
24 is nothing here in my years of experience in looking
25 at these things, there is no reason for evacuation,"

1 and he agreed with me. He said that he would get to
2 Headquarters and find out where it was initiating
3 from and attempt to stop.

4 Apparently he was talking to the wrong
5 people or the line of communication never made it to
6 where it had to go and the people at Headquarters
7 were just left in the dark as to where this 1200 MR
8 came from and where it had gone and where it was --
9 the significance of it. It just -- everthing seemed
10 to die when it went from the site trying to get to
11 Headquarters at that time.

12 Q While we have just gone back to reconstruct
13 history on that one thing, let's go in some general
14 areas on -- if you could do it over again and in
15 effect differently.

16 Would you change the makeup of the
17 first team going to the site, in retrospect, now?
18 What differences do you think you --

19 A The only change I would have made is I would
20 have preferred to have Don Haverkamp as the Operations
21 Member. Jim Higgins is Reactor Inspector and he knows
22 system, but Don Haverkamp would have been more familiar
23 with Three Mile Island than Unit 2. It's his Plant.
24 I do not, to this moment, know why he was not sent.
25 I just know it's a decision made by Brunner.

1 Q Would that carry over in any improvements you
2 might foresee yourself in evaluating the Plant status?

3 I distinguish here, you know, the reactor cooling
4 system and auxiliaries, and so forth.

5 A You mean would it have had any effect?

6 Q Yes. What would you look for as improvements
7 there?

8 A Well, it might have helped. In other words,
9 a greater familiarity with the system might have
10 helped out in that evaluation. George made that
11 decision when he sent Carl Plumlee. Carl Plumlee
12 was the Health-Physicist assigned to Three Mile Island
13 and Don Neeley was the Health-Physicist who was
14 supposed to take over the Plant.

15 Q They were the team men?

16 A Yes. They knew that Plant. Right.

17 Now, our feeling has always been
18 if the project man is there, you send him. If he
19 is not, well, of course, you pick someone else who
20 is -- say a PWR Inspector rather than a BWR and if
21 you can't, well then, you go down the line, but you
22 always start with your first team and get the best
23 guy there and in this case we did. It was adequate --
24 I mean Jim knows PWR's and is familiar, but I think
25 Haverkamp would have been better off in that position.

1 Q From the standpoint of evaluating sources of
2 off-site or on-site releases, can you envision any
3 changes that would have improved the performance of
4 the team response?

5 A Well, we didn't have or it was inoperable, the
6 air sampler. We had air samplers but they required
7 power. We didn't have a battery-operated sampler.
8 As it turned out, the Licensee readings were relatively
9 accurate; in other words, our confirmatory measurements
10 sort of were held up a little bit by this, but we had
11 more than enough equipment in that area now that we
12 realized our role is not going to be just information
13 gathering. This is something that we have tried to
14 impress on Headquarters for a long time. Now, we have
15 the equipment not only to measure, but to identify
16 the isotopes we are looking at.

17 If the licensee had been able to do
18 this, we would have had a lot less concern, even
19 on day one when we thought that all of this was
20 iodine. We found out later on in analysing it that
21 it was mostly Xenon.

22 Q Presuming for a moment that the Response Team
23 from the Region has the improvements or at least
24 substantial amount of the improvements in vision,
25 can you see a better way to deal with the State and

1 and the issue of protective action evacuation or
2 taking shelter, that sort of thing?

3 A Well, I don't know what you mean by a "better
4 way."

5 If the established procedures had
6 been followed, it would have worked out fine. If
7 the Licensee were to notify the state that "Hey,
8 we have a situation where we think that we are going
9 to exceed 1000 millirem to any great extent, we
10 recommend that you evacuate," or the State itself
11 were to measure, in the environment, conditions
12 which looked like these criteria were to be established
13 and then they make the recommendations to the Gover-
14 nor, everything would have worked out fine. This
15 false alarm would have been shut down almost im-
16 mediately. It's a technical -- people are involved.
17 The NRC's technical people, because we would be
18 involved with the Licensee's decision, the Licensee's
19 technical people and the State's technical people.
20 This got out of hand in that it became a political
21 decision and that's the way I would want to stop it;
22 that the State should go by established procedures
23 and the NRC should go by established procedures --
24 I mean if the Licensee doesn't follow his procedures,
25 we cite them and yet we threw the procedure book

1 out the window, as did the State.

2 BY MR. FRAMPTON:

3 Q Mr. Gallina, I think you left off at the point
4 where you were talking about the telephone conversa-
5 tion that you had with Mr. Dornsife on Friday.

6 A Right.

7 Q What else, if anything, occurred during that
8 conversation?

9 A Nothing of significance other than the fact that
10 we were both rather angry that this action was being
11 taken -- "Both of us," meaning myself and the NCR
12 on-site had a fairly accurate idea of what the off-
13 site dose rates were and what the conditions were.

14 Bill Dornsife also had a fairly ac-
15 curate idea of what was going on from his own people
16 and we both concurred that evacuation was totally
17 uncalled for and that his feeling was almost --
18 NRC had no right to recommend this unilateral
19 decision to evacuate coming from Headquarters. As
20 a matter of fact, I believe they both -- both he and
21 Margaret Reilly, who is also a member of the
22 Governor's Bureau of Radiological Health called Mr.
23 Collins at Headquarters -- well, I don't think that
24 conversation was taped, but I heard it was pretty --
25 they were pretty vehement in their opposition to this

1 and were pretty--that this thing had happened because
2 it certainly prevented their entire Emergency Plan
3 for the State of Pennsylvania.

4 Q Did you and Mr. Dornsife discuss the existence
5 of a 1200 MR reading in that telephone conversation?

6 A Yes, we did. This is the first time I had
7 learned of something else.

8 He said, "Well, gee, Chick, yesterday
9 we had 3000 MR at that point and it didn't give us
10 anything on-site or very little on-site and minimal
11 off-site."

12 I found out later shortly after we had
13 left on the 29th they had a puff release similar to
14 this that read 3000 millirem over stack.

15 The State was aware of it. We were
16 aware of it. As NRC, I personally wasn't but our
17 logs indicate that we knew it and we even transcribed
18 our facts down to Headquarters the night of the 29th,
19 this reading as part of the overall readings for the
20 day, so Headquarters knew that we had a 3000 MR read-
21 ing at this location the day before and yet they
22 pushed the panic button at 1200 MR on Friday the 30th,
23 so his basic premise was "Well, gee, we had 3000
24 yesterday and we did nothing because we saw nothing
25 off-site and here the NRC is panicing at 1200 MR the

1 next day," and he was right.

2 Q Were you aware, before the telephone conversa-
3 tion with him, that it had been the 1200 MR reading
4 that set off all of the trouble?

5 A Not specifically. I assumed that it was. That's
6 the highest reading I had seen.

7 Q Did he give you any more information about that?

8 A Well, he told us, he said, "We were notified
9 about this release earlier this morning," and he told
10 me "We received 1200 MR was the reading they had
11 gotten."

12 I said, "Yes, I remember seeing that
13 coming in from the helicopter when I looked at the
14 sheets when I got back to Unit," so I looked at it.
15 I saw 1200 MR that morning and didn't even think
16 twice about it, you know, you are sitting over the
17 vent stack. It's like if you put your head right
18 next to the car exhaust it will kill you, too, but
19 by the time it hits the ground or by the time it gets
20 off-site, you are not seeing anything.

21 Q Tell us what you know now about the reporting of
22 the 3000 MR reading of the day before back to MRC
23 Headquarters?

24 A Well, as I mentioned the first time I had heard
25 about this was on Friday when Bill Dornsife told me

1 about it. I had just missed it on Thursday because
2 I was called away to the press conference.

3 Q Right.

4 A I do not know that the number was reporter be-
5 cause we were taking the log sheets of the Licensee's
6 off-site measurements and reading them over the phone
7 to this office, to Region I and that this night, the
8 evening of the 29th, the summary of all the off-site
9 dose readings, chronology, if you were, was requested
10 by Headquarters. It was put together in this office
11 and facts to Headquarters some time late Thursday,
12 so not only did they probably get it directly when
13 we got it on Thursday, but they got a summary form
14 which clearly indicated that around 3 0'clock on the
15 29th that 3000 MR had been measured over the vent
16 stack.

17 Q When you say "they," do you know where it went
18 on the telecopier at Headquarters?

19 A That, I do not know. The problem that we had
20 run into -- and unfortunately I have to admit that we
21 predicted they would run into is that quote, unquote,
22 everybody had to get into the act and apparently the
23 people that made the decision on Friday morning as to
24 evacuation were not the people who had gotten the
25 information on Thursday evening with respect to the

1 3000 MR.

2 Q In terms of what you have learned since, do you
3 know who was in charge of getting that data together
4 here in Region I on Thursday night?

5 A I believe the person who reported it to the
6 office was John Serabian. The person who put the
7 data together or recorded it here, I am not sure
8 which -- it may be both was Mike Slobodien.

9 Q Do you happen to know who, at Headquarters,
10 asked them or asked Region I people to get all this
11 data together and ship it up there?

12 A I believe, I am not sure. I believe it was
13 Jim Sniezek who would be the Branch Chief for
14 Radiological -- I am not sure of his exact title,
15 but the Branch Chief at Headquarters. That's only
16 my belief. I am not really sure.

17 Q Did Dornsife tell you that he was going to try
18 and contact NRC Headquarters and protest?

19 A Yes.

20 Q Did he say anything about efforts that he would
21 make to communicate with the Governor's Office
22 or Pennsylvania Civil Defense Director and also
23 protest?

24 A I believe he mentioned that Tom Gerusky, who is
25 the head of their bureau, was going over to the

1 Governor's Office to try to set things straight.
2 The results of that -- it just -- to me it indicated
3 how they were feeling the combination of emotions
4 that I was, meaning, A, we were both angry;

5 B, we were very concerned about the
6 panic that it would cause and, C, we were trying to
7 take every action possible to recall the action,
8 to recall the evacuation order.

9 I had gotten angry and called George
10 Smith and tried to call him back. He had gotten
11 angry, called Headquarters to protest and sent Gerusky,
12 I guess, had gone over himself to the Governor's Office
13 to try to set things straight and call things back.

14 Q Was there a telephone line at that time from the
15 Unit 1 control room to Headquarters?

16 A No. Sometime late Thursday -- late Wednesday
17 we were told that the Headquarters communication
18 was being transferred over to Unit 2.

19 Q Did you observe, when you were in the Unit 2
20 Control Room that morning, that there was either a
21 direct line from there to Headquarters or the three-
22 way tie-in between Region I Headquarters and Unit
23 2 Control Room?

24 A There was a direct line between -- I know between
25 Unit 2 and Region I and I was assuming that

1 Headquarters was still connected to that line.

2 Q So you were assuming that someone in the Incidence
3 Response Center in Bethesda could pick up the phone
4 from it's cradle or the table and talk to Jim
5 Higgins or someone in the Unit 2 Control Room and
6 say "All right, tell me what's happening."

7 A Right.

8 Q If they wanted to?

9 A I assume they could have done that if they
10 wanted to. Now, Jim Higgins, again, may not have
11 known what was happening in the environment. He
12 would know what's happening with the reactor. Okay?

13 All he would have to do would be to
14 pick up the Hotline or call over to Unit 1 or have
15 Headquarters call Unit 1 and find out exactly what
16 was happening, because Unit 1 had all the information.
17 Their operators were following literally what was
18 going on in Unit 2. So, in one you had Plant status,
19 you had the on-site status and you had the off-site
20 coordination going on.

21 Q To the best of your recollection, who were the
22 NRC people in the Unit 2 Control Room when you
23 arrived at about 8 0'clock in the morning on Friday?

24 A To the best of my recollection, definitely Bill
25 Raymond -- I'm not sure if Jim Higgins was there or

1 if he arrived with me or shortly before me. I think
2 Walt Baunack was still there and I know Bechman was
3 there a little later, but I can't remember if he
4 was there when I arrived about 8 or 9 o'clock.

5 Q Do you know whether Mr. Raymond had been there
6 for some time?

7 A Would he have been there at 7:00 or 8:00 in the
8 morning when the release occurred?

9 A I think he was. I think he was working the
10 back shifts. He said -- he made a comment about
11 being tired.

12 Q What about Walt Baunack? Had he been there on
13 the midnight to 7:00 a.m. shift, also?

14 A I would guess so, but I really wouldn't know.

15 Q You are not sure?

16 A No.

17 Q After your telephone call with Mr. Dornsife,
18 what happened next in connection with evacuation or
19 this release or its effect?

20 A Well, at this point we are talking about the
21 initial -- what I refer to is the accidental evacua-
22 tion order. This is where Don Collin, from State
23 Programs, at someone's direction, I believe, Mr.
24 Denton called -- directly called Civil Defense. This
25 is when we are trying to call back.

1 Q But, as I understand it, at the same time you
2 are trying to call this back, you learned that the
3 Commissioners themselves are getting ready to put
4 into effect a real recommendation involving an
5 advisory on pregnant women and children; is that right?

6 A Right. Which, to me, was all -- you know --
7 again, you don't evacuate -- technically you don't
8 evacuate pregnant women or preschool children, you
9 evacuate families. That's why you have these guide-
10 lines, because when you call for an evacuation, you
11 are going to run into these problems.

12 As I remember it, when you call for
13 evacuation for five or ten miles you are almost
14 assuming that you are going to lose five lives, by
15 a general evacuation. You have got babies in hospi-
16 tals and old people and traffic accidents. It's
17 just a rule of thumb, so it was upsetting to put it
18 at best and then we heard pregnant women and pre-
19 school children -- it didn't sound like it was coming
20 from anybody who knew about an emergency planning at
21 Headquarters, either, but again, we were told or I
22 was told by George, he was kind -- very upset about
23 it. It's a management decision. We have to accept it
24 and I just sat down and I composed myself and said,
25 "People at Headquarters must know what they are doing.

1 They are looking at a bigger picture than I am here
2 in this one location," and I tried to accept it on
3 that basis, because just about at that point the word
4 had gotten to the Licensee people through their manage-
5 ment about this order and the Shift Supervisor and
6 one of their consultants stormed into our office
7 where we were and I thought we were almost going to
8 have a fight on our hands. That's how angry they
9 were.

10 As a matter of fact, through the whole
11 incident I never saw MET ED people lose their cool,
12 either panic or anger or anything until this point
13 when one of our inspectors got back from Unit 2,
14 Roger Avadowsky -- that his fist was cocked for 20
15 minutes; that he literally thought there was going to
16 be a free-for-all.

17 Well, we pulled the rug out from under
18 their feet. They have their procedures and we just
19 totally circumvented their procedures and the State
20 felt the same way.

21 Q At this point, all you had heard was that the
22 Commissioners were going to recommend this to the
23 Governor; is that right?

24 A. Right.

25 Q What was the next thing that happend in terms of

1 hearing some news about what was happening?

2 A. Well, we had a radio in the room off the Shift
3 Supervisor's Office and someone said, "It's coming
4 over the radio now," and we heard the announcement.

5 Q. This was now the announcement about the --

6 A. Governor Thornburg, roughly Governor Thornburg,
7 following the advice of Chairman James Henry of the
8 Nuclear Regulatory Commission, has ordered the follow-
9 ing, blah, blah, blah -- pregnant women, preschool
10 children, banks would be closed, if you don't have
11 a ride -- you know -- the fire engines are going to
12 be making announcements of where to go and they will
13 pick you up -- you know -- that's it. Doom, gloom
14 and doom all over the place and we just sat there
15 shaking our heads. Nothing we could do. You don't
16 realize how it sort of grows by itself -- I mean you
17 make -- you know -- the recommendation, next thing
18 you know we are hearing about banks being closed on
19 the news. They start to report how people were going
20 out and buying guns -- it just grew and grew and I
21 sat there in disbelief. I expected something like this
22 would happen, but if it were for a cause or a valid
23 reason, I'd say, "Fine, we will take that risk. We
24 have to," but we couldn't see it that morning. As a
25 matter of fact it was that morning when I called over

1 at 9 o'clock the NRC Inspector on the other side told
2 me about the hydrogen explosion that they had found
3 that occurred on Wednesday, because I asked him "Is
4 anything deteriorated?"

5 "No, we are in good shape, as a matter
6 of fact, we found out a little while ago that on
7 Wednesday we had a hydrogen explosion and they raised
8 containment pressure to 20 pounds and this thing
9 can stand 90 as an explosion," and even later when we
10 started with the hydrogen bubble in the reactor, we
11 all felt that -- gee, that's the way that they de-
12 gassed the reactor, anyway and any oxygen that's
13 formed in there is going to be pushed right back into
14 water, so you don't have to worry about an explosion
15 in the vessel. There is no omission source in there,
16 anyway.

17 Everything seemed to be going along
18 better, yet information was going up not in proportion
19 to the situation and there was nothing we could do.
20 Once the ball started rolling, it was just totally
21 out of our hands.

22 Q Was there anything else that happened after you
23 heard the announcement on the radio that's significant
24 to that announcement or the course of events leading
25 up to it? I guess I mean including any inquiries back

1 from Headquarters as to whether they did the right
2 thing or any followup on that specific matter?

3 A No. At that point in time -- not at this point
4 in time, but when I finished my shift on Friday and
5 went out to the observation center, trailers were
6 starting to come in -- all NRR and NRC -- I & E
7 people -- and they were just -- just everything
8 changed. We changed roles.

9 We were in an advisory capacity. It
10 was funny. That night Walt Baunack and I were having
11 a beer before we hit the sack and we were watching
12 this program on television and I said, "Gee, I think
13 this must have happened somewhere else."

14 He said, "What do you mean?"

15 I said, "Well, what we are talking
16 about on there isn't what is happening here," and the
17 press had it and it was just being blown out of pro-
18 portion. They just lost reality from that point on.

19 Q What was your perception about the source of
20 concern about the bubble being potentially explosive?

21 A Well, I got two impressions:

22 One, that the bubble would explode in
23 the reactor vessel itself and I think that we just
24 sort of wiped out very rapidly -- no source of oxygen,
25 very high -- hydrogen over pressure, no source of

1 ignition, so the fact that the reactor vessel would
2 explode, I just -- that didn't bother me at all,
3 assuming all this hydrogen -- or they are saying it
4 was hydrogen -- would get out into the containment
5 and then we could have an explosion in containment.
6 First of all, I don't believe it was all hydrogen to
7 begin with, because we were seeing a hell of a lot of
8 xenon and that's not condensable, as well as hydrogen,
9 so to me that gas -- as soon as it started venting,
10 we figured a lot of that xenon, not necessarily
11 hydrogen -- they were monitoring the oxygen content.
12 It went up a tenth of a percent or a couple tenths of
13 a percent. They were getting ready to hook up a
14 hydrogen recombiner, so that never entered my mind as
15 a source of -- you know -- concern or overconcern.

16 MR. BERNERO: May I interrupt? I
17 think you misspoke. You said they were monitor-
18 ing oxygen containment. Did you mean hydrogen?
19 A. (Continued) Yes, I'm sorry.

20 They were watching the hydrogen level,
21 you know, climb to like 2.4. It went to 2.4. We were
22 talking to some of the people in Licensing -- you
23 know -- the measurement is plus or minus that, also,
24 so there really was no upward trend. Even if there
25 was, they were -- you know -- still far away from

1 explosive limit and they were getting ready to get
2 rid of it anyway with the recombiner hook-up

3 Q Did you perceive concern among NRR people on the
4 site about this regardless of what you happened to
5 think as to whether it was really a risk?

6 A Well, the conversations that I was monitoring
7 between NRR people and their people on-site and off-
8 site, I didn't perceive any concern. I didn't per-
9 ceive any concern among I & E people about it. I have
10 no suicidal tendencies. If I thought the place was
11 going to blow up, I just wouldn't go in and I never
12 even thought about it twice. I don't know, maybe I
13 am just being unrealistic about it, but it never --
14 then they started preparing for the President to come
15 there on Sunday and then -- I said, "Heck, if they
16 are letting the President come here, they really
17 can't be concerned about if it is going to explode
18 or anything. They surely won't let him in here.

19 The whole hydrogen bubble thing just
20 got -- it just got blown out of proportion.

21 Q Where did you think the concern was coming from,
22 if not from NRC people on the site, did you have any
23 preception about it?

24 A I think the concern was coming from the press.
25 Sometimes I felt the concern was coming almost as an

1 attempt to cover up the fact that we had made a mis-
2 take.

3 Tom Gerusky made his comment and I
4 sort of felt the same way, that we -- Chairman Henry
5 made the recommendation to the Governor more to save
6 our credibility than it was -- you know -- a real
7 concern about evacuating. I think we blew it when we
8 accidentally ordered evacuation and the second order
9 was more of a save face gesture rather than any --
10 you know -- concern about a hydrogen explosion or
11 melt-down or anything like that.

12 That's my own personal feeling.

13 Q When you say "the second recommendation," you
14 mean the advisory with respect to pregnant women and
15 children?

16 A Yes.

17 Q Wasn't that really based on the releases, also,
18 rather than the hydrogen bubble?

19 A Well, like I said, the releases that we were
20 seeing on-site and off-site were minimal. If they
21 had that concern on Friday when the releases were all
22 but terminated, why not have done that Wednesday when
23 they were high?

24 Q But, putting the hydrogen bubble aside, what
25 you're saying that there was discussion or speculation

1 about is that the Commissioners, knowing that someone
2 from the Commission had recommended an evacuation
3 couldn't very well, without embarrassment, just take
4 it back a few hours later or an hour later and
5 therefore in effect decided to say, "Well, maybe we
6 ought to be cautious, at least, and have an advi-
7 sory --"?

8 A. Right. If we call it back, we have lost all our
9 credibility. If we have to call it again, they will
10 say "It's another false alarm, let's be cautious," and
11 almost I get the feeling on Saturday and Sunday that
12 all this caution about the hydrogen bubble business
13 sort of was that same type of feeling, that we would
14 look stupid if we said there was no problem and we
15 have gotten all pregnant women and children moved out
16 to the Hershey Medical Center. We were taking all
17 these precautions, true, there was a lot of gas in
18 containment, all right, if you want to look at that
19 as a source term and say if that gets out we have got
20 ourselves a problem, but that gas is still there.
21 We should have had the people evacuated until today,
22 if that's our real concern and again, there is a risk
23 with evacuation and you shouldn't take that risk un-
24 less the risk you are avoiding is greater or the risk
25 you are anticipating is greater than the risk of

1 evacuation and it never got to that point, so I think
2 a lot of concern -- maybe not all of it, but a lot
3 of the concern that was expressed on the days follow-
4 ing Black Friday, and it has come to be known as that,
5 was a save-face type of concern.

6 Q Let me go back and ask you a couple of questions
7 about your briefing of the Governor on Thursday.

8 When you told him in substance that
9 you thought that the off-site problem had been solved
10 or alleviated, what was the basis of your thinking about
11 that in addition to the fact that the readings had
12 actually gone down? In other words, did you believe
13 that MET ED had reached a point where they could pre-
14 vent all of the radioactivity in the Auxilary Build-
15 ing and the Fuel Handling Building from getting out,
16 at that point?

17 A Well, it was being contained at that point. Our
18 impression was that the uncontrollable part of the
19 releases that occurred on Wednesday and Thursday was
20 the fact that you had several thousand gallons of
21 water spilled over this Auxilary Building, that is
22 by no means air-tight. It's not a containment build-
23 ing. The xenon and gases being degassed from this
24 water are not totally filtered out by filter systems.
25 This appeared to be the main source of radioactivity.

1 Once that was cleaned up and pumped back, the levels
2 dropped dramatically. We still have releases and we
3 told the Governor that there still might be releases,
4 but when this occurred, we'd let them know and take
5 action accordingly, but as of this point in time the
6 radioactive releases that we have seen on Wednesday
7 and early Thursday seemed to be terminated and at
8 present it appears that we are now concentrating on
9 an on-site problem.

10 It may become an off-site problem
11 again and we told him that and we'd let him know
12 when it did, but right now it's in containment, and
13 that's where the problem is.

14 Q You were not aware at that time, then, in
15 detail of the problems that they were having in
16 offgassing the system or in gassing building up in
17 the makeup tank?

18 A No, I was not.

19 Q When did you first learn about that?

20 A Friday morning.

21 See, the problem we ran in to, and I
22 guess you have talked to Jim about this, Jim Higgins,
23 when we had our news conference and meeting with the
24 Governor on Wednesday we felt relatively confident in
25 what we were telling them because we had been there

1 all day. This is as first-hand information that he
2 was going to get, because we were the ones that were
3 there most of the day.

4 Q You are speaking of Wednesday?

5 A Wednesday.

6 Q The 28th?

7 A Right.

8 On Thursday we were called out of
9 there at 2 0'clock, so I had been on-site six hours.
10 Jim had only been on-site maybe an hour, because he
11 got tied up with Dick Vollmer and the meetings they
12 had with Licensing people and he said, going over
13 there "I am not as confident today, because I am
14 giving information that I am getting from the Licensee
15 and debriefings and stuff like that. I have not been
16 here all day like I was yesterday."

17 So, I said, "Well, that's the best
18 information we have got."

19 He said, "What are we going to do?"

20 Q Do you know whether he wanted to express some
21 unease or concern to Mr. Keimig about his going
22 back for another briefing?

23 A Well, he expressed it to me a couple of times;
24 as a matter of fact, he even expressed it to the
25 Governor's Press Secretary and I believe to Karl

1 Abraham. I felt confident in what I was talking about
2 as far as off-site doses, because I was there and I
3 was seeing what was being recorded.

4 As far as my knowledge of operationally
5 what happened, while I was getting that from Jim and
6 I had been told by the licensee, so I didn't have
7 first-hand knowledge of it; therefore, I didn't know
8 about the degassing problems or things like that until
9 I found out first-hand on Friday.

10 Q Do you remember, in your conversation with the
11 Governor on Thursday, any conversation about the
12 effects of low level radiation on pregnant women or
13 anything like that?

14 A Well, I believe on Thursday Dr. Sternglass had
15 made some comment about all pregnant women should be
16 evacuated and the Governor asked me what my feelings
17 were about it and I said, "Governor, my wife is
18 pregnant and we have --" I have to go back and
19 figure out how old it was, but "A little over a year
20 old daughter."

21 I said, "I would have absolutely no
22 objection to her coming out here and seeing me, be-
23 cause the levels just aren't high enough to cause
24 any concern."

25 I tried to put it in perspective for

1 him by saying that 30 millirem or 40 millirem is
2 roughly the equivalent of smoking three cigarettes
3 as far as cancer risk is concerned, so that calmed
4 him down and put things in perspective for him

5 The way we were seeing it on Thursday
6 and Friday, like I said before, you could take a
7 measurement and then come back ten minutes later and
8 it would be gone. It was a puff here, a puff there.
9 Nobody was ever really in one place long enough to
10 get anything, you know, really significant.

11 By "significant," I mean -- you know --
12 approaching a thousand millirem. As a matter of fact,
13 I think it was determined that the worse dose they
14 found or extrapolated is less than 100 millirem to
15 any individual. So, in that case, you know, we did
16 talk about it and he was kind of debating whether to
17 make some statement about it.

18 His advisor told him not to say any-
19 thing about Sternglass and Karl Abraham told us not
20 to say anything about my wife being pregnant, and all
21 this other stuff, so we didn't, at the news conference.

22 Q Did you know, when you went over there, that the
23 briefing was going to be followed by another new
24 conference or did you have a good idea it probably
25 would be?

1 A I am not really sure. I think both times I was
2 caught off-guard by the fact that there was going
3 to be a news conference following it. I knew, both
4 times, we were told we were going to brief the
5 Governor. On Thursday we could have assumed it, be-
6 cause as soon as we walked out into the observation
7 center, we were bombarded with reporters and I told
8 him we couldn't talk because we were getting picked up
9 by a State Trooper to go brief the Governor and I
10 think one reporter did mention that -- oh, yes, there
11 is going to be a news conference later on.

12 Now, I don't know whether that meant
13 us or him or what, but we were caught by surprise,
14 I think, both times.

15 Q I think you said on Thursday that it was Boyce
16 Grier who called and said, "They want you back."

17 On Wednesday you had been asked to
18 come over to brief the Lieutenant Governor by somebody
19 on his staff?

20 A Yes.

21 Q And you checked with the Region or with somebody
22 to see whether you should do that, or did you?

23 A Well, I informed the Region that we had been
24 requested to go over and they told me "Well, Rick
25 Keimig is on his way. If he gets there in time before

1 you, he should go as a representative."

2 He never made it.

3 Q This is on Wednesday, now, we are talking about?

4 A Wednesday.

5 Boyce Grier said, "Look, Chick, just
6 tell him the information as you know it. Don't ex-
7 aggerate it or don't play it down. Just give them the
8 facts."

9 I said, "Fine, that's what I would do,
10 anyway."

11 Q This is with Mr. Grier, when you were talking
12 about who should go and whether you should go?

13 A Well, we knew who had been requested to go.

14 Q You were just letting him know?

15 A Letting him know and telling him that we had been
16 requested and we would comply.

17 Q And he didn't raise any problems about that?

18 A No, he didn't raise any questions.

19 Q I believe you said that on Friday morning while
20 both Control Rooms had telephone lines to Region I,
21 Unit 1 Control Room did not have a telephone line to
22 Betnseda.

23 A We were not talking in a conference mode where I
24 could talk to both at the same time, no.

25 Q I'd like to go back to the time you first came

1 into the Unit 1 Control Room and ask you to recount
2 what you recalled between then and Friday morning
3 as to the telephone ties that each Control Room had
4 with Region I and with Bethesda. I realize that may
5 be difficult, but just to ask you what you can recall
6 about that?

7 A. Okay.

8 When we walked -- let me back up.
9 Before we left here I was told that we were maintain-
10 ing an open line from this office to Three Mile Island.
11 I think it was Unit 2 Control Room, because that's
12 where we got the information.

13 When we got into the Shift Supervisor's
14 Office on Wednesday the 28th --

15 Q. This would have been about 10 o'clock?

16 A. 10 o'clock.

17 Q. In the morning?

18 A. Right. There were two MET ED employees sitting
19 at this big table and they both had a phone laying
20 down in front of them. We were told that one phone
21 was directly to the State of Pennsylvania, the other
22 individual was talking to the phone and he said that
23 the guy on the other end of the phone wanted to talk
24 to someone from the NRC -- I think Don Necley answered
25 the phone or I answered the phone and it was Region I,

1 so in other words, from the time we walked in to the
2 Shift Supervisor's Office, I could talk to Region I or
3 to the State of Pennsylvania and throughout the day
4 I talked quite frequently with both, especially to
5 Pennsylvania -- all the information we received we
6 relayed to Pennsylvania.

7 Some time later in the morning or early
8 afternoon Headquarters was connected in that line to
9 Region I, so I could talk -- I believe that first day
10 it was either Mike Wilbur or Colonel Whitt at Head-
11 quarters and Region I at the same time.

12 Q. Now, this was from the Unit 1 --

13 A. Unit 1.

14 Q. Control Room?

15 A. Right.

16 Q. Was that early afternoon, late afternoon, do
17 you recall?

18 A. I think this is early afternoon.

19 Q. And did that continue throughout the day while
20 you were there until you left?

21 A. Yes.

22 I believe at this time, because Unit 2
23 was in respirators, there was very little information
24 getting directly from Unit 2 to Region I or to Head-
25 quarters. It was all coming through Unit 1.

1 Some time later in the afternoon I
2 recall that Region I stated that we were now in
3 direct contact with Unit 2, so at this point in time
4 Unit 1 is talking with Region I and Headquarters,
5 Unit 2 is talking with Region I. Now, Region I can
6 talk to each other upstairs, so in effect we were all
7 talking together, but some time late in the afternoon
8 on Wednesday we were told that the three-way conver-
9 sation, in other words, the Headquarters hook-up was
10 going to be relayed to Unit 2, so before we left on
11 Wednesday Unit 1 and Region I were talking by direct
12 line. Unit 2, Region I and Headquarters were talking
13 by direct line. Headquarters now had dropped off
14 Unit 1, but Unit 1 remained on for over a week.

15 Q You don't know, then, whether at the time of the
16 Stello-Hitz conversation there was in fact a direct
17 line between Unit 2 and Bethesda?

18 A To the best of my recollection, I believe there
19 was, but I couldn't be sure of that.

20 (short recess)

21 BY MR. FRAMPTON:

22 Q Dr. Gallina, I think that you said earlier that
23 you had been one of the authors of the Region I
24 Emergency Plan; is that right?

25 A That's correct.

1 Q And that you have inspected various Plants to
2 determine the adequacy of their Emergency Plans as
3 well?

4 A That's correct.

5 Q And I think you said that as a result of your
6 experience in that area that you were aware that the
7 NRC would probably have to play a more active role in
8 case of an accident than the role set forth in these
9 plans or at least in the NRC plan?

10 A Right.

11 Q Could you explain that a little more fully?

12 A Well, it's something -- well, two ways of looking
13 at it. Licensing used the NRC in a very special way.
14 There is nothing you can do about it. When you are
15 on-site they look up to you as the authority as to
16 what to do and if they feel they don't have the
17 situation under control, they will automatically
18 turn to you and ask for assistance.

19 In an emergency planning, if you, as
20 an inspector, if we come upon an incident, chances
21 are that assistance will probably be needed. We
22 tried to write this into our plan, but for reasons
23 which I don't know, we received a lot of pressure
24 against it.

25 Q Where was that pressure coming from?

1 A. From Headquarters.

2 We were just supposed to go there and -
3 almost like a non-interference type of mentality. We
4 go there and gather information and it was ironic,
5 because at the same time some people at Headquarters,
6 basically NRR, felt that we should almost manage or
7 take over the incident from Bethesda, which is another
8 thing which we did not believe should be done. Our
9 feeling was that when we respond to an incident, we
10 are going to have to provide assistance.

11 Q. When you say it was "Our feeling -- "

12 A. I & E on a Regional level.

13 Q. People who were working on the plan?

14 A. Who work on Emergency Plans, who deal day-to-day
15 with the Licensee. You get to understand their
16 mentality, their method of operation and you see the
17 needs under accident conditions where you have to
18 provide, not only possibly equipment but your
19 technical background and your expertise is going to
20 have to come into play.

21 Q. Does this relate as much to Reactor Operations
22 as it does to Health-Physics and monitoring, would
23 you say?

24 A. Well, it pertains more to radiological areas
25 then this does to operations. Basically on an

1 operations standpoint, because of the very rigorous
2 training programs and day-to-day operation of the
3 Plant, your Licensee Operators are very competent,
4 probably the most competent to operate the Plant.

5 From my personal position if I were
6 operations oriented, I would not want to take over
7 a Plant because I could have all the experience in
8 the world with nuclear energy and still not be as
9 familiar with that particular reactor as the actual
10 operators are.

11 Health-physics, on the other hand,
12 is something that really comes into play under
13 accident conditions and it's not something used
14 day in and day out. In other words, accident-type
15 Health-Physics, and under these conditions the
16 Licensee is travelling into virgin territory and
17 they do need help and assistance and we always felt
18 that when a real accident occurred we probably would
19 have to provide it. These are the two things that
20 we tried to instill as we wrote the plan and tried
21 to develop it, that A, you cannot manage a reactor
22 by remote control and,

23 B when we arrive at the site we
24 should be in a position to provide assistance to
25 the Licensee, especially in radiological matters.

1 As a matter of fact, in one of the
2 drills that we conducted in order to show the Head-
3 quarters that you cannot manage a drill -- manage
4 an accident by remote control, our scenario involved
5 the elimination of the Reactor Control Room Operators.
6 We had a chlorine leak and the Reactor Operators
7 were overcome and incapacitated, leaving just the NRC
8 Inspector at the site. We never drilled this with
9 Headquarters because our director at the time felt
10 that it might be embarrassing and so we drilled it
11 here until we got to that point and then sort of
12 stopped the drill, but in effect what we would be
13 telling Headquarters to do was "Okay, you have got
14 bodies now in the Control Room, try and operate it
15 from Bethesda," and we realized that it wouldn't
16 work, but Headquarters was never involved in that
17 drill.

18 On the other hand, we always planned
19 to be able to assist the Licensee and the best we
20 could do when we put our plan together -- and I guess
21 there must be some liability or somebody was worried
22 about something when all this was developed. We sort
23 of snuck it in under the phrase "Our primary mission
24 is to obtain information, et cetera, et cetera;"
25 however should radiological assistance be needed, we

1 will provide it until other more appropriate personnel
2 arrive at the site.

3 Where are you going to get more appro-
4 priate than NRC Inspectors, I don't know, but there
5 are others -- I mean -- you know -- but we tried to
6 work it in that way, so we realized that we would
7 be providing that type of help. We geared our
8 emergency planning for that.

9 Our equipment was geared for that, so
10 it was there.

11 The people at the Regional level
12 realized the need and took care of it and tried to
13 force-feed it upon Headquarters people as we -- you
14 know -- as the occasion arose. We did get quite a
15 bit of resistance, some of it is documented.

16 Dale Donaldson, who is the currently
17 Emergency Planning Officer has done this and he has
18 a lot of this documentation in memos that we have sent
19 pointing out some of the shortcomings in Manual
20 Chapters and Headquarters Emergency Planning Docu-
21 ments that speak to this issue.

22 Q Is the Utility people inevitably will look to
23 the NRC for authority and advice in an accident
24 situation, isn't it inevitable that the State
25 Authorities will look to the Federal agency for the

1 same kind of authority and advice in the case of
2 the problems relating to evacuation?

3 A Yes, but in both cases it's not a direct type
4 of interaction.

5 Let me give you an example.

6 When they had some problems with let-
7 down, they wanted -- some valves had to be manipulated
8 and they wanted absolution from ten CFR 20 which
9 limits quarterly exposure to three REM per quarter
10 so they called us directly and said, "Look, we think
11 we have to send a guy in here. He may get up to 5
12 REM. Can we waive the three REM per quarter limit?"

13 We told him, "No, you can't. Emergency,
14 technically, is over."

15 This is a day or two after the -- you
16 know -- the incident. We are now in recovery phase.
17 We are going by the book, but every time they make
18 a decision it would be either done in cooperation with
19 the NRC or the NRC would be informed of it and what
20 we had was more or less a tacit veto power. If
21 we didn't say anything, they would assume that they
22 could go on their merry way or whatever decision
23 they had made. If they had something to say and
24 we said, "No, we wouldn't accept it," it's not like
25 they are turning to us and saying, "What should we

1 do?" It's sort of doing what they think should be
2 done, letting us know about it, if we approve it,
3 fine, if they don't, it's a how do you think it should
4 be done type of question.

5 With the State, it's the same thing.
6 Knowing that we were on-site and as a matter of fact,
7 the transcripts actually bring this out, the State
8 would get a recommendation from the Utility to
9 evacuate, knowing that in that decision they would
10 have approval and then the state would evaluate the
11 data, take into account the fact that the NRC is
12 there and has approved this decision and make a
13 decision.

14 When Governor Thornburg was talking
15 to Chairman Henry about various information that
16 they were getting at Headquarters, he said, "Do you
17 have a man named Gallina who works for you?"

18 He didn't recognize my name, but
19 Thornburg said, "Well, Dr. Gallina and Mr. Gerusky
20 have been in close contact for the past couple of
21 days and if Dr. Gallina's feeling about the nature of
22 this release is the same as Tom Gerusky's, I feel
23 a lot more comfortable about it. This was a 1200
24 MR per hour reading or the dose rate reading on Friday.

25 Again, you see here there is this

1 tacid approval with the NRC. We are there. We
2 are evaluating what the Licensee is doing. We would
3 not -- if the Licensee made a recommendation to
4 evacuate that we didn't agree with, they'd know about
5 it.

6 Q I understand what you are saying. I understand
7 why the procedures which call for the state to make
8 a decision based on its own monitoring or its con-
9 tact with the Utility.

10 A Right.

11 Q And with people on the site makes sense and I
12 understand further why, in a situation where the
13 Governor, the Lieutenant Governor had personal con-
14 tact with NRC people on the site, that they may regard
15 that as an appropriate and sufficient NRC input?

16 A Right.

17 Q What I am getting at is as follows:

18 Even if this is a desirable procedure,
19 even if that's the most desirable procedure, how
20 do you square that with the or how did you deal with
21 the problem that inevitably the State Government and
22 the public may look to for NRC management in Washing-
23 ton to tell them? Is it safe? Should we evacuate?

24 Isn't the public going to be reluctant
25 and aren't many State Governments going to be

1 reluctant to take the word of a Utility Company as
2 to whether hundreds of thousands of people should be
3 moved out of the area? How do you deal with that
4 problem in the future? How do you factor that in?

5 A. Well, every emergency plan in this region, that
6 I am aware of, has that similar method of declaring
7 evacuation.

8 Licensee's people are the first ones
9 that are there. If this evacuation decision has to
10 be made within hours or minutes after the incident
11 occurs, the Licensee evaluation with State concurrent
12 is the only source of information that the State
13 Government has.

14 When we arrive we may add a little bit
15 more credibility to it. Okay? If, as you say,
16 people are going to look to Washington for the
17 bottom line as to whether evacuation is needed, then
18 the only way to get around the problem is to make sure
19 that Washington is making a decision based on the
20 facts as they actually are and if they don't have the
21 facts, then they should make the decision -- the
22 people that have them should.

23 Q. Do you think that in this case, in hindsight,
24 given that people were in fact looking to Washington
25 rather than Region I Headquarters for advice, that

1 it would have been possible to handle the situation
2 from Bethesda rather than through the Region?

3 A. I am not -- would it be possible? If Bethesda
4 had had the proper lines of communication, they could
5 have verified every reading or every bit of informa-
6 tion that they had received and consequently their
7 decision would have been made on a more realistic
8 basis than it in fact was.

9 Now, I am not sure if I am answering
10 your question.

11 Q. Well, you said before that there was some desire
12 at Headquarters to take over in a situation like this.

13 A. That's right.

14 Q. And that you thought that that would be very
15 difficult to do or to do well. Is that fair to say?

16 A. Right.

17 Q. What I am asking you is in a situation where it
18 turns out that because an accident becomes a national
19 issue and a national problem, that State Officials
20 look to Washington for their principal advice, whether
21 they ought to be doing that or not, do you think that
22 changes, in your mind, the desirability of Bethesda
23 taking over?

24 A. Well, as it stands now, I still think that that
25 would be an unacceptable situation. In other words,

1 if things were going to operate tomorrow the way
2 they did in March, then the decision would be just
3 as unacceptable to me as it was then.

4 If -- Regional people are the first on
5 the scene and then Bethesda personnel also respond
6 to the scene, so that in effect although Bethesda or
7 Washington is making the decision, it's coming from
8 valid information from NRC at the site, regardless
9 of who makes it, the decision is just as valid. It's
10 when the information isn't valid, whether it has come
11 from Bethesda or the Region or anywhere, you are going
12 to run into the same problem. The problem is that
13 emergency planning in this whole area has been, for
14 want of a better word, the bastard child of Reactor
15 Operations. It's the thing that nobody ever thought
16 would happen and ever played it down. It was un-
17 important. Then as the importance grew and more
18 people got involved -- State Representatives, then
19 Congressional Representatives and then State Senators
20 and the Governor and then the Federal Senators and
21 then the President, then everybody all of a sudden
22 felt that it became so important that everybody had
23 to get in and make -- be part of the decision and it
24 went then from all the technical planning just got
25 short-circuited. Everybody felt -- "Well, gee, if

1 it's my site or my area, I should be there and know
2 what's going on," and they started making decisions
3 at that level without getting all the information
4 from the lower level and what happened is a matter of
5 record.

6 Q You said that when you first went to the site
7 you didn't have any thought that Headquarters had the
8 prerogative to order the Licensee to do something, if
9 necessary?

10 A Or stop doing something, if necessary, right.

11 Q Is that through the License Authority?

12 A Well, I guess they could do it verbally, ini-
13 tially or they can issue an order to have it done.
14 To the best of my knowledge, during the course of
15 the incident, this was only done once and that was
16 on Thursday evening, I believe the 29th when they
17 ordered the Licensee to stop the discharge of the
18 industrial waste treatment system. Now, that was
19 a direct order from Headquarters to the Licensee.
20 Now, if the licensee had not complied, I am sure a
21 legal order could have been issued to have them
22 cease and desist discharge. So, I know they have
23 the power to do it.

24 Q What about oral instructions by inspectors
25 on-site with respect to operational decisions.

1 Do you think that should be part of the emergency
2 authority of the people who respond to an accident
3 from the Region?

4 A That's a hard question to answer. I personally
5 can picture situations where that would be a good thing
6 to have. In a situation where we have just mentioned,
7 it was a stop doing this type of thing.

8 As far as telling Licensee what to do,
9 it's looking at it in a different way. I don't think
10 that they should have that responsibility because
11 I don't think they are the most capable to make
12 those decisions as to do this or that. That's my
13 own personal feeling. We can give our opinions and
14 usually Licensee will consider them and in most cases
15 listens to them and acts upon them, but to have the
16 direct authority to go in and say "You operate the
17 Plant in this manner," I am not sure if that's what
18 we are looking for.

19 Q Did any occasion arise during the first five
20 days of the accident when you thought that the
21 exercise of such authority by NRC people on-site
22 would have been desirable to tell the Utility people
23 to start doing something or stop doing something,
24 "We disagree with what you are doing?"

25 A Well, in fact we did. I don't know whether we

1 had the authority or not, but we did.

2 One of our inspectors, for example,
3 found a problem with respirators. They were getting
4 grease and oil coating on the facemask, indicating
5 that the air wasn't clean and he just went to Licensee
6 Management and ordered the operation stopped, and
7 they did.

8 Q What operation was that?

9 A In other words, the operations involving these
10 respirators, that particular job was stopped because
11 it could have injured the health of one of the people
12 wearing them and we did not let it continue again
13 until the cause of the problem was identified. So,
14 whether we had the legal authority to do that or not,
15 when we come up against the problem where health and
16 safety is clearly involved, we just -- we take the
17 prerogative upon ourselves and tell the Licensee what to
18 do. I guess, legally, he can tell us -- you know --
19 "Forget it," that he don't want to do it, but we never
20 had that problem.

21 Q How do you personally evaluate MET ED's emergency
22 response organizationally? I am not asking you about
23 substantive decisions that were made with respect to
24 operations or the Health-Physics Program, but in the
25 way they set up their organization?

1 A Well, if they had set up the way they were
2 supposed to set up in accordance with their procedures,
3 we would have had a lot less problems than we did.
4 I think what happened to MET ED is similar to what
5 happened with the NRC, in that upper management people
6 took control and decided to make decisions independ-
7 ently of what the procedures told them to do.

8 For example, their procedures state
9 that the Maintenance Foreman is in charge of repair
10 parties and he reports or checks out with the Health-
11 Physics Foreman before entering an area. What happened
12 that day was the Station Superintendent took four
13 people and said, "You, you, you and you, you do this,
14 you do that" and he designated the roles on the spot.
15 He took control.

16 Consequently, people were acting in-
17 dependent of the procedures. They were told what to
18 do and they did it.

19 People entered areas without knowing
20 what they were entering in, from a dose standpoint,
21 and the emergency planning system sort of fell down.
22 So, when you say "How do you evaluate the Licensee's
23 emergency planning," you are actually going to have
24 to say -- well, their procedures were okay or adequate,
25 if not perfect but if they circumvented their

1 procedures, then the plan -- the effectiveness could
2 be either better or worse than you thought it would
3 be.

4 Q Well, I am not asking how good their procedures
5 were and I am not asking about whether they followed
6 them. I am asking the question as follows:

7 Putting aside the procedures, let's
8 assume they never had to develop any procedures and
9 they never did and looking at how they organized to
10 cope with the problem that they had in front of them,
11 how do you evaluate their response on that basis?

12 A Fair to poor.

13 Q How do you relate the shortcomings in their
14 response to the shortcomings -- in the NRC's response?
15 How do you evaluate the NRC's emergency response?

16 A Well, the emergency response, as far as I was
17 involved in, in what I could see, I personally be-
18 lieved it went a lot better than I thought that it
19 might under these conditions. Yes, some people did
20 make some decisions that -- you know -- were not
21 called for in procedures, et cetera, but, by and
22 large, our response was effective. We more or less
23 adopted to the situation as it arose and even though
24 our procedures didn't call for certain things, we just
25 adopted to the situation and did what we had to do and

1 until we ran into some serious problems on Friday the
2 30th, I think our overall response initially was
3 adequate. We should have gotten more people there
4 sooner, that's something we can speak to in the future,
5 but I would rate ours fair to good -- not excellent or
6 perfect by any means, but it was adequate.

7 Q Do you think that Region I and the NRC Head-
8 quarters in Washington were really psychologically
9 repaired or realistically expected to have to function
10 as an Emergency Response Organization

11 A I don't think either was prepared -- well, let
12 me put it this way:

13 I don't think either Headquarters or
14 the Region ever expected an incident of this type.
15 I think the Region was more prepared than Headquarters,
16 because the Regional people -- not all the Regional
17 people, but the Health-Physics people who deal with
18 these problems day in and day out were more prepared
19 for it, because we see it on a smaller scale more
20 often than even Operations people and I think in
21 that sense we were more prepared and more comfortable
22 in this situation than with Operations people in the
23 Region or Headquarters Personnel in general.

24 Does that answer your question?

25 Q You think that mentality has changed since the

1 accident?

2 A. I think it has changed somewhat.

3 Q. The reason I ask that question is that I noticed
4 something I have never seen before and that is a
5 permanent telephone in the washroom with three or
6 four lines on it and I wondered if that signifies
7 a somewhat different mentality about the role of --

8 A. Well, that particular modification, I believe
9 in my opinion, was an overreaction.

10 The problem or the reason why that
11 telephone is there now is because the incident
12 occurred at a time where the Duty Officer was en-
13 route from his home to the office, so it was felt at
14 that time that a Duty Officer would be present and
15 here 24 hours and be able to get a notification from
16 the Licensee within three rings, which meant that if
17 he were in the bathroom he'd have to have a telephone
18 nearby.

19 There are other phones that have been
20 added since then in the room where we kept our food,
21 in the Docket Room, so that no matter where we were
22 when we had a 24 hour Duty Officer present in this
23 building, we can get that phone by three rings.

24 The shortcoming is even if we get the
25 information, we still have to call together a team,

1 so if I answer that phone at 3 o'clock in the morning
2 in the bathroom, I still have to call out five guys
3 out of bed and they still have to travel here to get
4 the emergency vehicle and equipment and respond to
5 the site. You can just as well answer that phone
6 in my bedroom at home as a Duty Officer, so I think
7 that particular aspect is an overreaction.

8 The Hotline telephones to all the
9 Control Rooms, I feel is a reaction to Three Mile
10 Island that is constructive. The problems that we had
11 with communication, namely the Duty Officer being
12 enroute was a problem that Dale Donaldson and I
13 pointed out to Headquarters several months ago or
14 years ago; that we wanted a mobile telephone that
15 could be assigned to a government vehicle and that
16 the Duty Officer would have this enroute, so he could
17 pick up the phone enroute, but this was lost in the
18 underbrush, again at Headquarters, but there are memos
19 documenting all these shortcomings that we did find
20 in our communications.

21 We have problems in responding to the
22 site, not in our response. We had all the equipment
23 and manpower, but we had no way of communicating with
24 the Region enroute to the site and consequently the
25 only news of what we were getting into we had to get

1 over the radio and the Licensee was really playing
2 down the seriousness of the situation, so when we got
3 there we were going into it cold, whereas if we had
4 a mobile telephone we could be getting updates from
5 the Region as we got to the site.

6 This, again, was pointed out to Head-
7 quarters and we had a mobile telephone that wasn't
8 perfect and they pulled it out and never replaced it
9 with one that worked adequately.

10 So, again, it sort of fell through
11 the crack.

12 Today, I think, if we made that re-
13 commendation we'd have the right equipment.

14 Q Did the separate reporting chains or management
15 chains of NRR and I & E, during the first few days
16 on the site, hinder the agency's response, in your
17 opinion?

18 A I think it did.

19 After a couple days everything became
20 more or less familiar and NRR and everything blended
21 together, so we were talking to everybody -- you
22 know -- as if we had known them forever; however,
23 initially it almost was as if two separate groups
24 were responding to the incident. What happened there
25 was I & E was there -- you know -- we are normally in

1 with the site and we responded to the site and I
2 think we had a better handle as to what was going on
3 and then all of a sudden we had a shift-over to
4 NRR and I & E became more less -- not a staff function,
5 but a support function and it was confusing, not so
6 much to I & E people but even to the Licensee as
7 to who they were dealing with.

8 They tried to say NRC, but then they
9 would differentiate between NRR and I & E and it
10 became a little bit confusing.

11 Q Did you personally communicate Health-Physics
12 data back to NRC Region I or Bethesda?

13 A Yes.

14 Q How was that done? When did it begin and in
15 what format was it done?

16 A From almost the time we arrived on-site, the
17 first information we relayed back was information
18 that the Licensee had obtained, off-site readings,
19 as they would come in a copy would be given to me and
20 I'd relay it over the telephone.

21 Q Was that to Region I?

22 A To Region I, right and in some cases to the
23 Commonwealth of Pennsylvania.

24 Once our inspectors were out and they
25 would come back with on-site survey information or

1 off-site survey information this, too, would be related
2 back over the phone to Region I.

3 Region I had access to any information
4 that we had at the site or could have gotten any
5 information they desired. If they wanted to know the
6 age of the Reactor Control Room Operator, we would
7 have just gone out and asked it.

8 If they wanted this meter reading or
9 that meter reading or anything that we possibly could
10 get, we could get to them. Sometimes there would
11 be a time delay if it dealt with Unit 2 directly,
12 but anything they wanted they could have gotten.

13 Q Did you communicate monitoring data directly
14 to Bethesda or was it all to Unit 1 -- I mean to
15 Region I?

16 A For that time period when Bethesda was hooked
17 up concurrently with Region I, then I was communicat-
18 ing to both at the same time. I never spoke to
19 Bethesda separate from Region I.

20 Q Who did you talk to here? Was it whoever was
21 on the phone line or was there one person?

22 A There was one communicator and they would change
23 shifts periodically. Rick Keimig was there early
24 in the morning, Don Capeton early in the morning
25 and most of the day; Don Haverkamp -- it changed from

1 time-to-time.

2 Q Did you get feedback or requests for additional
3 information from the Region?

4 A Yes.

5 Q This kind of information?

6 A Yes.

7 Q Okay.

8 A In other words, for Campbell, the decision to
9 send inspectors off-site and on-site to confirm
10 Licensee measurements was a request made from here.

11 "We need to get conformatory measure-
12 ments, send so and so out."

13 Q When was that done or is that an occasional
14 periodic request?

15 A Well, depending on how -- you know -- if they
16 felt they needed a piece of information, they'd let
17 me know and I'd send somebody out to do it.

18 Q Did you develop any kind of model or format so
19 that every so often you could give them the following
20 nine stations reading, something like that?

21 A Yes. Very rapidly we put together a format of
22 on-site dose readings, off-site dose readings as they
23 would come in, depending on where the wind was
24 blowing and various monitor readings on-site.

25 Sometimes it was given twice a shift,

1 some were given hourly, some once a shift, depending
2 on how they were changing, but very rapidly we
3 developed, based on what instrumentation we had, a
4 set -- a given set of numbers that would be relayed
5 to the Region at a set time.

6 Q And it's your understanding that all of that data
7 for the first two days was collected together on
8 Thursday night to be sent back to Headquarters?

9 A Yes. I believe there is documentation to that
10 effect for Thursday night.

11 Q Did you ever seek assistance from IRACT?

12 A I believe that on the morning of the incident --
13 I am not sure it's IRACT -- the acronym has changed
14 several times. We call them RAP, which is the Response
15 Team out of Brookhaven. We notified them on Wednesday
16 morning and they responded.

17 Q I am speaking of something that stands for
18 Atmospheric Release Advice --

19 A No.

20 Q Dealing with meteorological perimeters?

21 A I personally am not --

22 Q Are you familiar with that --

23 A No.

24 Q -- capability?

25 We have some information that one or

1 more NRC people at the site had, in their possession,
2 Potassium Iodide tablets or solution. Do you have
3 any knowledge of that?

4 A As far as individuals are concerned?

5 Q Yes.

6 A No, I have no knowledge of that at all. I was
7 informed sometime into the incident that arrangements
8 were being made to have a supply of Potassium Iodide
9 solution available for NRC personnel, should the need
10 arise that we have to evacuate, but as far as in-
11 dividuals having it on their own, other than the
12 supply designated as NRC, no, I am not aware of that
13 at all.

14 Q Do you have any knowledge or have you heard from
15 any source in the last year of any access by any
16 NRC employees to Potassium Iodide other than in an
17 official documented capacity?

18 A No.

19 MR. FRAMPTON: I think that's all the
20 questions we have.

21 We appreciate your time and your
22 candor. I guess I should ask you one final ques-
23 tion before we let you go and that is this:

24 You have been interviewed as some con-
25 siderable length by I & E Investigators and the

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Persident's Commission and by myself.

Are there any other areas that haven't been inquired into, subject matters that haven't been inquired into in any of those interviews that you have some knowledge about that you think is significant with respect to the accident or the ramifications of the accident?

THE WITNESS: No. I think between the several interviews I have had that all the important areas have been covered.

MR. FRAMPTON: Dr. Gallina, you have brought us a one-page resume which I will asked be marked as Gallina Exhibit A.

Is that your resume?

THE WITNESS: Yes, it is.

(Resume of Dr. Gallina was marked for identification as Gallina Exhibit A)

(Witness excused)

(Whereupon the deposition was adjourned at 12:15 p.m.)

- - - - -