

NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:

THREE MILE ISLAND
SPECIAL INQUIRY DEPOSITION

DEPOSITION OF: HERMAN M. DIECKAMP

Place - MIDDLETOWN, PA.

Date - WEDNESDAY, OCTOBER 3, 1979

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UNITED STATES OF AMERICA

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BEFORE: :

NUCLEAR REGULATORY COMMISSION :

THREE MILE ISLAND :

SPECIAL INQUIRY GROUP :

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Oral Deposition of HERMAN M. DIECKAMP

APPEARANCES:

GEORGE T. FRAMPTON, JR., ESQ.
For - Nuclear Regulatory Commission
Special Inquiry Group

DAVID J. EVANS, ESQ.
U.S. NRC TMI Special Inquiry Group

JAMES B. LIBERMAN
General Counsel

ALSO PRESENT:

Hartmut Schierling, E.H.
James C. Snell
R. Lawrence Vandenberg

TAKEN AT:

Three Mile Island
Middletown, Pa.

Wednesday,
October 3, 1979
at 9:10 a.m.

I N D E X

<u>WITNESS:</u>	<u>EXAMINED BY:</u>	<u>PAGE NUMBER</u>
Herman M. Dieckamp	Mr. Frampton	2

E X H I B I T S

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Exhibits

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Exhibit 18

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1 HERMAN M. DIECKAMP, Sworn

2 MR. FRAMPTON: This is the deposition of Mr.
3 Herman Dieckamp being taken by the U. S. Nuclear Regulatory
4 Commission's Special Inquiry Group on the accident at Three
5 Mile Island at Three Mile Island, Pennsylvania on October 3,
6 1979.

7 Present in addition to Mr. Dieckamp are Mr.
8 James Liberman, representing GPU and Mr. Dieckamp. In
9 addition, Mr. Vandenberg, Mr. Snell, Mr. Schierling, Mr.
10 Evans, and Mr. Frampton all of the Special Inquiry Group.

11 BY MR. FRAMPTON:

12 Q Mr. Dieckamp, I have shown you our Witness
13 Notification Form that describes the purpose of this depo-
14 sition, your rights in connection with it, and the fact that
15 the transcript of the deposition may eventually in whole or
16 in part become public information.

17 Have you read that and do you have any questions
18 about it?

19 A. No. I have read it and I have no problem with it
20 whatsoever.

21 Q We do have the benefit of prior public testimony
22 that you have given, which we have studied and we also have
23 the transcript as corrected by you of the deposition you
24 gave, I believe, in early August to the President's Commission
25 Staff.

1 We will attempt not to repeat matters that are
2 covered in that other testimony just for the purpose of saying
3 that we asked you the same questions. We will try to focus
4 on things that have not already been covered in prior testi-
5 mony.

6 I would like to begin by asking you a series of
7 questions concerning your activities on March 28th and the
8 four or five days after that.

9 I believe that you have testified before that you
10 were in Harrisburg that morning and that you got a message
11 around 9:00 o'clock in the morning about a incident at
12 TMI-2 and that you shortly thereafter talked to Mr. Creitz
13 and Mr. Arnold, is that right?

14 A. That is right.

15 Q Then you recall talking to either Mr. Arnold or
16 Mr. Creitz an hour or two later in the morning on that date?

17 A. That is right.

18 Q Based on what you learned from them in those
19 telephone conversations or any other conversations you had
20 that morning, what kind of an impression did you have about
21 the situation here?

22 A. I couldn't say that the impressions I gained were
23 very clear in talking with Creitz and Arnold. I guess I
24 learned of the shutdown of the plant, the actuation of the
25 emergency core cooling system, the radiation alarms, the

1 declaration of the site in general emergencies, the off
2 site radiation monitoring, the indicated levels of off site
3 activity releases, specifically at Goldsboro. The indication
4 or the impression from the plant that there had been fuel
5 damage.

6 I recall specifically having questioned the obser-
7 vation conclusion about fuel damage and having questioned it
8 on the basis of saying that, "Well, if the emergency core
9 cooling system was activated, isn't the design basis for the
10 emergency core cooling system to prevent that fuel failure?"
11 Therefore, I am not sure I know why we got failed fuel so I
12 am nervous about that conclusion. If we got radiation, we
13 can't set that aside but at least I was concerned about what
14 appeared to me to be the immediate inconsistency of those
15 things.

16 I really did not get a very strong feeling about
17 exactly where we were. I didn't get the feeling of impending
18 danger or the depth of problem that I ultimately became aware
19 of.

20 I also, on that same morning, stood in on the
21 Bill Scranton press briefing in the State Capitol. It must
22 have been around 11:00 o'clock in the morning; at which
23 point I guess it was Bill Dornsisf who was giving a fair
24 amount of a run down of what he understood to be the status
25 of things at the plant. I don't know where Dornsisf got his

1 information, but I guess my immediate reaction at the time
2 was that Dornsisf was terribly positive and I wasn't quite
3 sure in my own mind that there was a basis for being quite
4 as positive as he sounded.

5 Q How did you come to go to that briefing?

6 A Since I was in that complex there, I was in the
7 North Office Building in a meeting with the Pennsylvania PUC,
8 I became aware of that briefing and I just decided to go up
9 and listen in to see -- it was just another opportunity for
10 me to learn what was going on.

11 Q Nobody turned to you, I take it, and asked you
12 during the briefing what you knew about this?

13 A No. I am not sure anybody even knew who I was.
14 It is a very small crowded kind of a little room and I just
15 stood in the back and listened to the -- the reporters were
16 all crowded around the front talking to Dornsisf and Scranton.
17 I was probably kind of unobserved. Not that I made any great
18 effort to be unobserved, but I didn't make any effort to
19 push myself forward because I frankly had very little
20 information.

21 Q Why do you say he was surprisingly positive?

22 A Because he was -- my impression was simply that I
23 felt he was positive. It was not that he was saying things
24 that I knew to be wrong, but that he was saying things that
25 I didn't feel that I would have been able to say with quite

1 that degree of positiveness, simply because of what I didn't
2 know rather than what I did know.

3 I definitely had that kind of a feeling, you know,
4 a kind of a generalized feeling. In a sense, I probably
5 learned -- Dornsisf's words were probably 90 percent of what
6 I knew at that time. In a sense, I took his words also as
7 being somewhat reassuring to me of the status of things even
8 though I was a little nervous of whether he really knew things
9 as well as they sounded when he made the statements.

10 Q As you stood there, did you believe that the plant
11 was shut down?

12 A Yes. No, I was assured of that early on that the
13 plant had tripped, the rods had been inserted, the power
14 level was down, and the plant was shut down. What I did not
15 know at that time and did not come to know a day or a day and
16 a half if not more, that the emergency -- the high pressure
17 injection system had been defeated or interrupted and thus
18 the very premise that I was dealing from that the inherent
19 plant system would prevent these kinds of occurrences had
20 been contravened and had not been able to function. (sic)

21 Q As of late morning, was Mr. Dornsisf saying or
22 did you note that the reactor coolant pumps were off or
23 there was some problem with forced cooling?

24 A No, I don't have a recollection -- a specific
25 knowledge of whether the coolant pumps were turned off. I

1 really did not become aware of that -- perhaps I was aware
2 of it. I was aware that they had to have been off because I
3 became aware late that same evening after the plant had --
4 after forced cooling had been re-established that a limiting
5 factor had been in getting a coolant pump back into operation.

6 I guess I have to say in that sense I had to become
7 aware that the pumps had been off and that the forcing action
8 had stopped.

9 Q I am interested in the reaction which you expressed,
10 and I believe it was over the telephone, to Mr. Arnold about
11 the possibility of fuel failure.

12 The way I heard it, do you recall saying to him
13 in substance, "That can't happen, that is why we have an
14 emergency core cooling system"?

15 A I don't know whether I said it that way or whether
16 I said that is inconsistent with the design -- the basis for
17 the design criteria of the emergency core cooling system. I
18 am sure there is a substantive difference in the way you say
19 that, but as I recall, when the suggestion -- I think both
20 Arnold and Creitz were very direct with me in saying, "We
21 feel there are indications failed fuel." There is no
22 question that they said that.

23 My reaction to that was one of being somewhat
24 reluctant to believe that on the basis of my understanding
25 of the way in which the emergency core cooling was supposed

1 to work.

2 Q It is that state of mind I am really trying to get
3 at.

4 You have had very extensive experiences with
5 reactor operations and reactor design. I wonder if that is
6 a fair reflection of a state of mind that we have these
7 safety systems so it can't happen, it is impossible, that is
8 not supposed to happen.

9 Is that a fair characterization of your thinking
10 about the safety systems that they made impossible, in effect,
11 some kind of fuel damage?

12 A Let me comment about that.

13 First of all, with respect to the background, I
14 have certainly had alot of background in nuclear power, but I
15 would not, at that time, have listed myself as one of the
16 nation's experts in water reactors.

17 Alot of my experience has been in the breeder
18 reactor technology and that sort of thing. There are alot
19 of details of water reactors that I have come to know since
20 the accident that I didn't know on that day.

21 With respect to the state of mind thing, I would
22 have to say that philosophically, I have always understood,
23 you know, the fundamental basis of the reactor safety and
24 the fundamental aspects of all the possible faults and
25 reliabilities and faultries and analysis and the maximum

1 and credible accidents and all those things. Certainly,
2 they never in my mind got even to the point of saying it
3 can't happen.

4 At the same time, I have to say to you that indeed
5 my reaction was one of having an initial reluctance to
6 accept the observation of failed fuel on the basis that meant
7 to me that the emergency cooling system had not functioned
8 in the way in which it was supposed to have functioned. That
9 was the conclusion that I drew.

10 I said I am reluctant to accept that unless we
11 really know that is the case. It implied that immediately
12 to me that says, "Hey, that means the emergency cooling
13 system didn't work." That is something that needs to be
14 looked at, that is something that needs to be checked, that
15 is something that needs to be pursued.

16 Q I think that afternoon you met Mr. Herbein and
17 Mr. Miller on the steps of the State House as they were
18 coming to brief the Lieutenant Governor, is that right?

19 A Yes.

20 Q Was that by chance or design?

21 A No. In talking to Creitz later in the morning,
22 and I don't recall exactly when, he told me that Herbein
23 had this date set with Scranton at 2:00 o'clock. Since
24 our session with the PUC was over around lunch, 12:30 or
25 something like that, I decided that I will stick around and

1 I will sit in on that session; again, wanting to learn more
2 and find out more.

3 I went to the Lieutenant Governor's office and got
4 there about 2:00 o'clock and stood around for awhile and
5 talked to a few of the guys and told them who I was and what
6 I was there for.

7 Sometime before 2:30, and I don't know whether
8 it was ten after 2:00 or somewhere in there, I was in effect
9 disinvited. I said, "Okay, this is your business. I am not
10 here to inject myself so if I am disinvited, I will leave."

11 Q By whom were you disinvited?

12 A Specifically, Ray Holtz. I don't know what his
13 job is or whether he is still there. I think he had pre-
14 viously been with the Governor's Energy Council, the Lieuten-
15 ant Governor. He came to me and said, "You know, we would
16 kind of like to keep this at a low key meeting, just among
17 the local folks."

18 I said, "Ray, do I understand you are asking me
19 to leave?" He said, "Yes." I didn't think it was appropriate
20 to argue with him so I left.

21 In a sense, I personally didn't have anything
22 specific to contribute to the conversation, but I was
23 concerned that our guys would be careful about not glossing
24 things over and what have you. As I walked out, I did indeed
25 encounter -- and this was now by happenstance, I encountered

1 Herbein, Miller, and George Kunder. They were getting out
2 of the car and coming up the steps. I stopped there and
3 spoke with them for a couple of minutes because they were
4 late and I didn't want to hold them up.

5 My first reaction was one of chagrin that those
6 three guys should all be absent from the plant, and I sort
7 of expressed that view to them. I said, "My God, who is
8 watching the store?" We had some brief discussion to that
9 effect.

10 I don't think I could swear to it, but my mind
11 tells me that I think I said something to them like, "Tell
12 it like it is." You know, it was just a rather brief encounter
13 because they were in a hurry to get there.

14 Q You didn't see them after they came out?

15 A No, I did not.

16 Q Did you get any chance to talk with them about
17 their impressions about the status of the plant at that time?

18 A No, only very briefly and only to the extent in
19 that brief encounter they in no way reflected to me that
20 things were in some extreme state of distress.

21 I guess I can't be clear in my mind about the
22 degree of which that was explicitly stated or the degree
23 to which I somewhat concluded that on the basis of their
24 own decision for the three of them to absent themselves from
25 the plant. I certainly didn't have conveyed to me at that

1 point any indication of the level of difficulty that
2 ultimately we all became aware of.

3 Q They didn't let you know or give you the impression
4 that they might still have a continuing problem from an
5 operation's or shut down point of view?

6 A Well, I am very hazy on that. I would not
7 characterize it as their saying that everything was completely
8 under control. I think in terms of their feeling of comfort
9 that things were stable, I think I got that impression from
10 them.

11 When you get to the specifics of whether there
12 was a pump running at the time and the problem they were
13 having with re-establishing pressure, I am not sure the
14 exchange was anywhere near of sufficient depth to get that
15 kind of a real feeling on the status of things.

16 I didn't get that kind of a mixed feeling until
17 after I got back to New Jersey, and talking with Bob Arnold
18 on the phone and hearing from him that he and Herbein, after
19 Herbein returned from the Lieutenant Governor's office, that
20 he and Herbein had sort of reached a position or a judgment
21 that says, "Let's just jam water in it until we take that
22 thing solid and get flow," and that they then achieved that
23 by 7:00 or 8:00 o'clock in the morning.

24 I think I was talking to him in that time period
25 with that sort of milestone having been reached.

1 Again, I would say if I tried to recreate, I would
2 sort of -- in the business then of understanding the effort
3 that was necessary to re-establish force convection that I
4 became more cognizant of the exact or at least the degree of
5 problems that they had been through during the day.

6 Q. Between 2:30 in the afternoon and whenever you
7 talked to Mr. Arnold as you just described, did you have any
8 other conversations or status updates about the plant?

9 A. No. I guess I can't reconstruct where all the time
10 went. I basically proceeded to go back to New Jersey. What
11 I don't know right now, and I would have to consult records
12 as to how I got back. I don't know whether I flew back or
13 was driven back, I am not certain about that.

14 I might have been driven back. Very likely I
15 was driven back which in turn would contribute to the time
16 schedules involved.

17 Q. Did you have any contact with media people or
18 with NRC people on Wednesday?

19 A. No.

20 Q. Did you have any participation in drafting any
21 press releases or statements that would be read on the phone
22 in response to the inquiries?

23 A. No.

24 Q. On Thursday I believe you came back to the site
25 for the briefing of the Senators and Congressmen who came

1 up here from Washington?

2 A. Yes.

3 Q. Had you known you were going to do that as of
4 Wednesday night, do you remember that?

5 A. I don't know whether I got that Wednesday night or
6 Thursday morning. It seems to me I got to the site around
7 1:30 or 2:00 o'clock. I know I flew out so I suspect I got
8 that word Thursday morning.

9 Q. Did you introduce Mr. Herbein or make a short
10 introduction?

11 A. I made a few introductory comments and Herbein
12 provided a briefing. Do you have a transcript of that?

13 Q. I don't know whether we do. I think one exists.
14 I personally have not seen it.

15 A. A transcript of that exists because a fellow --
16 well, one of the things I was concerned about and what I
17 knew of this visit was whether or not the Lieutenant Governor's
18 office was knowledgeable of this.

19 I tried to make sure he was aware of this visit,
20 so if he chose, he could sit in on this discussion or briefing
21 or what have you.

22 He toured the plant, I think, around noon that day
23 but chose not to be present during this briefing with
24 Senator Hart and other members of his subcommittee. He did
25 have a fellow by the name of Benesch attend for him.

1 Benesch wanted to record it. I personally said
2 to Benesch, "Look Benesch, I am not sure we record the doings
3 of Senators without their approval. I don't have any problem
4 in recording it, but I think you better make sure Senator
5 Hart has no problem with it."

6 It turned out that he did not have a problem and
7 as a result Benesch made a recording.

8 Benesch agreed to give a copy of the recording
9 to Dick Vollmer. He subsequently refused to give us a copy
10 so we were able to get a copy from Dick Vollmer. There is
11 a transcript. It has got some rough spots in it because of
12 the quality of the recording and the like. I think it is
13 probably one of the better indicators of Jack Herbein's
14 specific state knowledge at that time and how he was express-
15 ing it.

16 To me, I think alot of the tone of that even
17 though it was in that kind of a session and in many subsequent
18 sessions, it was very difficult to main. control of any
19 tone. Alot of the tone was, there is alot we don't know.

20 Q When you were at the site, did you discuss with
21 Jack Herbein or anyone else, the fact that there were small
22 releases being seen as a result of off gassing the primary
23 system and gas going through the auxiliary building? Did
24 that come up on Thursday?

25 A I was aware that there was some continuing levels

1 of releases and local radiation. I was of the impression
2 that they were quite minimal, minor.

3 Probably the most significant specific thing that
4 I was not aware of was the high measurement by the helicopter
5 over the stack that afternoon.

6 Q Thursday afternoon?

7 A That is right.

8 I don't know whether Jack was aware of that
9 measurement because it was right at about 2:00 o'clock or
10 somewhere in that area. I had this general feeling of
11 rather minor, you know, a few M. R. kind of environmental
12 readings, but no indications of specific levels of release
13 as measured at that same time and no discussion or awareness
14 of the plant operations that were leading to those releases.

15 Q It appears that mid or late afternoon the people
16 in the Unit Two Control Room, at least, had correlated these
17 releases or peaks in the release to the venting of the make-
18 up tank and so forth.

19 There wasn't any discussion of correlation between
20 an operation and a release that day?

21 A I certainly was unaware of that.

22 Q Did you then return to Parsipanny after the
23 briefing of the Congressman?

24 A Yes.

25 Q While you were at the site on Thursday, did you

1 have any contact with media people or with NRC people?

2 A. Well, when I got to the Visitor's Center, I met
3 Dick Vollmer. I had known Dick Vollmer alot of years going
4 back to Atomics International. We spoke about the situation
5 and what he was going to be doing. I think his anticipation
6 and my understanding at the time was that he was going to lead
7 an NRC investigation into, I guess at that time, I may have
8 called it, an event rather than an accident.

9 During the briefing with Senator Hart, I intro-
10 duced Dick and asked whether he had anything he wanted to
11 say. He said just a very few things like, "I just got here,"
12 and what we are going to do about an investigation.

13 I also met then while I was there, the first of
14 our guys -- maybe not the first, but a number of the guys
15 who were arriving for the purpose of the GPU, Met-Ed inves-
16 tigation. Specifically, Bill Lowe and Tom Cremins, and
17 I am not sure how many others, but they were arriving that
18 afternoon to go into the plant to begin their investigation.

19 I think they remained there in the Visitor's Center
20 for this briefing of Senator Hart; essentially for the reason
21 of expecting that Herbein's summary of things would be sort
22 of an immediate opportunity for them to get a bit of an
23 overview status, starting point understanding where things
24 were.

25 Q. As of that time, had you made any requests for

1 assistance from other industrial groups outside of GPU?

2 A. Well, to the extent that a fellow like Bill Lowe
3 was outside GPU, I would have to say no. Bill Lowe is a
4 consultant who has worked for us for many years. In that
5 sense, he was an outside guy, but not in the sense of the
6 outside of what became the industrial advisory group.

7 Q. Mr. Lowe, or his firm, has a standing contract
8 with GPU Service?

9 A. Yes.

10 Q. Did you learn that evening from Mr. Arnold or
11 from other people that the analysis that was ongoing here
12 at the site revealed that the problem was probably more
13 serious than you thought before?

14 A. I think it was in talking with Bob Arnold that
15 evening, Thursday evening, that I first became aware that
16 the high pressure injection system had been defeated and
17 that very likely the core had been uncovered to some degree.
18 In the course of that, I became aware of a next level of
19 awareness of the potential damage to the fuel.

20 Beyond that, it was my impression at that time,
21 both from the visit Thursday afternoon and still also from
22 that conversation with Bob, that things were stable. I think
23 it was my perception of a growing awareness of a greater
24 level of potential physical damage to the core materials
25 discharging, you know, with early recognition of the possibilities

1 of cracked, popped glidings and the like, and getting to
2 the point of starved cooling and uncovering being more
3 severe and the damage to the fuel, but still coming back then
4 to, we have flow, we have forced convection, temperatures are
5 in reasonable ranges, things seem to be stable.

6 I think it was also -- I know it was on that
7 Thursday night that Bob said to me, "I have been thinking
8 further about the kinds of things we are going to have to
9 do in terms of the investigation and organizing the investi-
10 gation and so on, assistance in the ongoing operation. I
11 have a number of thoughts about how to organize it and the
12 kind of people we better bring into the job."

13 He said, "Do you want me to come in and see you
14 first thing in the morning?" I said, "No, I think the best
15 thing for you to do is to go straight to the site and don't
16 bother to come in and talk to me about it. Just go straight
17 to the site and begin talking with Jack Herbein to begin
18 implementing these things."

19 Q. You are speaking now of the investigation?

20 A. This was in the context at that point then of
21 investigation that I think by that point a growing awareness
22 that we had more things that we were going to have to do than
23 just kind of quietly sit back and investigate. There was
24 a greater awareness that there were more problems that were
25 going to be required to support the ongoing operations and

1 the like.

2 I don't know that that was specified in terms of
3 specific activities, but --

4 Q What I am getting at is this: Mr. Arnold at some
5 point on Thursday night or Friday morning perceived a need
6 for, I think, what he called a more formal inquiry board
7 which would be people from the service company and some outside
8 people to look into what had happened.

9 Was there a distinction between that idea of his
10 and your now perceiving a need for outside people to help you
11 with the recovery, with the ongoing problems?

12 A I would characterize it this way: On probably
13 Wednesday night, Thursday, we identified a half a dozen
14 fellows to be sort of an incident-accident investigation
15 inquiry group.

16 Q To reconstruct the events?

17 A Yes, what happened.

18 By Thursday night they had grown to an awareness
19 of a greater need to provide additional levels of technical
20 support to the plant. It was in that relationship that Bob
21 said he had thoughts about organization and people and tasks
22 division support. He and I did not discuss that in detail.

23 I said, "Gee, I am sure you got to do that; just
24 go straight to the site and begin doing it. Don't bother
25 to check with me on that." That is what put him at the site

1 early Friday morning.

2 Q . And you began to work on calling more people?

3 A. No, let me go one more step.

4 Then comes Friday morning and there is the major
5 release that caused the significant upgrading of people's
6 awareness of the fact that things were not as stable as
7 previously perceived or assumed or characterized. I guess
8 I became aware of that around 9:00 or 10:00 in the morning,
9 roughly.

10 Q. How did you learn of that, do you remember?

11 A. I think we started getting phone calls about news
12 inquiries. I am not clear on this, but I probably got a
13 phone call from Bob Arnold early Friday morning or in that
14 time period that gave us kind of a status report on what --
15 about this release and the implications of it.

16 It was at that point that I then sort of officially
17 decided that we were going to need more help, more smarts,
18 the best smarts we could get and began then to make inquiry
19 throughout the industry to get assistants to give us a hand.

20 As I began then to call people, it was still in
21 a very generalized kind of a way. I think by that time I
22 had become aware that we were faced, and again there is this
23 growing awareness, that we had the probability of extensive
24 core damage from the evidences of uncovering. I became more
25 keenly aware of the significance of some of the hot spot

1 temperature indications as contrasted with the mixed mean
2 outlook temperature and also aware of the presence of the
3 large quantity of non-condensable gas in the primary system.

4 As I began to talk to people, I said to them,
5 "Look, I think we need people who are system analysts, people
6 who understand the hydraulics and understand heat transfer."
7 I said, "I don't know exactly what we are going to have to
8 do. I just think we are going to need smarts in those areas.
9 Who do you got? Who is a good guy?"

10 If I happened to know of somebody, I would say,
11 "Could so and so come to help pitch in and see what we've got
12 to do?" It was not in a clear knowledge that we were going
13 to do A, B, C, but rather a kind of a feeling that these
14 were the areas of technology or the areas of different
15 disciplines or phenomenon that we were going to have to deal
16 with.

17 Q Did you spend a good part of Friday calling
18 people yourself, or did you have other staff people doing
19 alot of that, do you remember?

20 A I spent a good part of Friday and through virtually
21 all of Friday night, I stayed overnight in the office.
22 calling people and talking occasionally with the site. We
23 were having significant telephone problems with the site so
24 we kind of worked out an arrangement that Arnold would try
25 to call in and call back to Parsippany every hour or hour

1 and a half as he would get a chance to give us an update.

2 During Friday night, communications weren't too
3 bad at 2:00 o'clock in the morning. I spent a fair amount of
4 time several times that night talking with Bill Lowe about
5 the business of the non-condensable gas, the hydrogen, the
6 way it was measured, the size of the problems with radiolytic
7 decomposition, the rates and all those kinds of things.

8 Having a certain back of the envelope awareness
9 of radiolytic decomposition of water because years ago I
10 worked on solution reactors where you get alot of radiolytic
11 decomposition....

12 I spent a fair fraction and I couldn't tell you
13 exactly whether it is a half or two-thirds of the time
14 during Friday -- late Friday morning and Friday afternoon
15 calling people. Bud Cherry, one of the guys, pitched in.
16 He called several people, several organizations. One of his
17 guys had worked at Electric Boat and he gave us a name of
18 a guy at Electric Boat and got access to some health-physics
19 people.

20 That went on, I would say, during the day Friday
21 and on into Saturday morning. I think some of the initial
22 people I contacted were EPI people and asked specifically
23 for Levinson and Zebroski because I had gotten to know those
24 individuals quite well over the last few years and knew of
25 their capabilities.

1 Floyd Culler helped me identify people within
2 Oak Ridge who could be useful to the radiation control or
3 radiation waste problem. He was a fellow by the name of
4 Bob Brooksbank who came as a result of that inquiry.

5 I talked with Bud Cherry, I talked with Philadelphia
6 Electric and Public Service Electric and Gas relative to
7 health-physics type people through Bud Cherry through Jim
8 McConnell who made contact with Electric Boat. I in turn
9 had to call a fellow in the Naval Reactor Branch by the name
10 of Miles in order to get Electric Boat to feel comfortable
11 to let a health-physics guy become available, et cetera.

12 It was that kind of a chain of communications that
13 we had to go through to get that guy here.

14 I talked to people at Bechtel, I talked to my
15 former colleagues at AI and asked them for specific people.

16 I think there is a list of organizations that I
17 specifically contacted that we gave to the NRC Inquiry Group.
18 I don't know whether you have that list or not.

19 MR. FRAMPTON: Off the record.

20 (Discussion had off the record.)

21 THE WITNESS: This started, you know, late Friday
22 morning, Friday afternoon, Friday evening on through Saturday
23 and as late as Saturday evening and Saturday evening I
24 know specifically after getting to the site here I was still
25 calling people like Libarrando and Kauffman from EG&G or

1 fellows with a law program background and also I called Dale
2 Myers at DOE and asked him to round up masses of foremost
3 experts in hydrogen because we need a hydrogen expert here.
4 Most of these people that I had contacted, a good fraction of
5 them, arranged to arrive here late Saturday afternoon.

6 We had the first sort of formative meeting of the
7 IAG -- what became the IAG down at Building 26, somewhere
8 around, and I don't know whether it was 4:00, 5:00, 6:00
9 o'clock in the afternoon on Saturday.

10 BY MR. FRAMPTON:

11 Q Let me stop you for a minute and ask you whether
12 by the end of Saturday night you had pretty much completed
13 the process of calling people to get the major systems you
14 needed or whether that continued on into Sunday morning?

15 A No. I think it ought to be characterized this
16 way: With the exception of discussions with B&W Management
17 and discussions with Westinghouse that occurred over the
18 next two or three days, my efforts to aggregate additional
19 people into that group essentially stopped. What happened
20 then, was the group tended to self aggregate additional
21 people, guys like Levinson and Zebroski and Leavy, began
22 to bring in other people on their own.

23 Q For areas that their colleagues perceived --

24 A That's right. That group then grew from, you
25 know -- I guess personally I might relate to nucleating

1 25 to 30 people. That group then grew to something over a
2 hundred in the next week and I think there were a few people
3 that also sort of added into that group by the NRC. The
4 specific guy that falls into that category is the instrument
5 guy.

6 Q Ackerman?

7 A Ackerman. I think he was brought in -- maybe
8 Vic Stello or someone called him and Ackerman kind of joined
9 that group.

10 In other words, it kind of became an amalgam of
11 people once the original nucleation and then it sort of self -
12 propagation and co-opting some of the NRC people.

13 Q Did you yourself identify areas where the best
14 people that you could get quickly would be NRC people? Did
15 you request specific people from the NRC?

16 A I would say there was only one -- I keep thinking
17 maybe two, and I can't think of what the second one was, but
18 at least one specific case where I did not go after somebody
19 in the NRC because I knew he was the best guy. When I went
20 after the fellows at EG&G because of their loft background,
21 they in turn said, "Gosh, we work for the NRC and we are not
22 sure we want to give you a hand. We may have a conflict of
23 interest problem."

24 I said, "Well, I would hope that you can talk to
25 the NRC and resolve that problem because we are both trying

1 to do the same job." Indeed, that is what happened. They
2 talked to the NRC and then got back to me and said, "We've
3 got it cleared and we will be there."

4 I felt kind of good about the way that worked out.
5 We didn't really end up with a hard barrier there that was
6 controlled by a conflict of interest question. I guess I
7 didn't really relate to anybody specific in the NRC. After
8 I got here I began to realize that concurrent with this
9 formation of the IAG, the NRC fellows had their own network
10 out that was accessing all kinds of organizations, vendors,
11 contractors, their national labs. I guess over the next few
12 days we found that some of these organizations were fighting
13 themselves getting the same or similar or slightly different
14 questions from the two sources, one from us and one from the
15 NRC and we had a little bit of confusion occasionally out in
16 some of these contractor shops in terms of who is calling
17 what shots.

18 Again, I think those things worked out. They
19 were not really a critical problem other than a bit of a
20 very minor piece of inefficiency, and that is a neutral word.

21 Q I would like to go back for a minute to Friday
22 morning and ask you whether you had any conversations on
23 Friday morning or early Friday afternoon with either NRC
24 people or state officials as a result of the evacuation plan.

25 A I don't recall any conversations with anybody in

1 Pennsylvania State Government on Friday. I recall conversa-
2 tions on Friday afternoon with an aide to Governor Burn who
3 was calling to keep Governor Burn informed. We did have
4 that contact, but I don't recall and I am virtually certain
5 that no direct contact between me and anybody in Pennsylvania
6 State Government.

7 I don't have any recollection of any specific
8 conversation with anybody in the NPC on Friday. I do clearly
9 recall on Saturday morning approaching noon or 11:30, 12:00
10 o'clock, somewhere in that general time period, getting three
11 phone calls in rapid succession from Denton, Hendrie, and
12 Watson all with the same message. They said, "Gee, we urge
13 you guys to get busy and try and bring as many outside experts
14 as you can."

15 I specifically recall talking to Jack Watson
16 and rattling off the longer list of people that we had already
17 made arrangements with. I don't have quite the same recol-
18 lection of the same degree of a longer listing in talking
19 with Denton or Hendrie. I may have, I may not have.

20 Q Did Mr. Hendrie tell you that Denton was going to
21 come to the site?

22 A No, I don't have any remembrance of that.

23 Q Did Denton?

24 A No. I think he told me, "I am here."

25 Q He was already here?

1 A. Yes. This was Saturday morning when I talked to
2 him. I probably learned about it in the newspaper or maybe
3 Bob Arnold or somebody told me Friday night that he had
4 arrived. That would have come up late Friday afternoon.

5 Q. Do you recall any other subjects that you talked
6 about with Harold Denton?

7 A. In that time period, Friday or Saturday?

8 Q. Yes.

9 A. Again, I am virtually certain I didn't talk to
10 him on Friday and on Saturday. I think the principle thrust
11 of it was, "Why don't you guys go to work and round up as
12 many experts out of the industry as you can find to beef up
13 the support?" I think that was the gist of it.

14 I don't have a recollection of any other content
15 to that discussion.

16 Q. Did you talk to either of them on the telephone
17 before you arrived at the site about whether the NRC was
18 going to get more involved in decision making here with
19 respect to the operation of the plant?

20 A. No. I had that kind of a conversation with Denton
21 once I got here. I don't recall -- not in terms of specific
22 occasions, but sort of an amorphous recollection of the
23 tone because as far as I was concerned, and I think I
24 radiated that to Denton and others, whether it was Stello,
25 Ross, or Mattson, that I didn't see us with any conflict in

1 terms of who is in charge. I felt we were both faced with
2 a "hell" of a tough job.

3 In fact, I made specific pleas to sort of set
4 aside the normal adversary relationship between regulator
5 and regulated. I think I said, "Look, we got one job to do,
6 let's combine our resources to do this job."

7 I also told Denton that if the problem ever got
8 so bad that we as a company had to agree that it was beyond
9 our resources to handle, there was not going to be any
10 problem in terms of who is in charge. We weren't going to
11 be reluctant to ask them to bring in their resources or
12 what have you.

13 Q When you say their resources, you mean the NRC
14 resources?

15 A The federal government or whoever. I just felt
16 that we have got a problem here that we have got to handle,
17 and this is not a time for some sort of dancing around the
18 daisy chain of who is in charge. Who's responsible? Who
19 isn't responsible? That wasn't the issue.

20 Q Did you feel that the NRC's technical assistance
21 on the weekend and over the next week or 10 days was a very
22 significant input or would you say that the bulk or almost
23 all of the technical expertise came from GPU and from the
24 other industry people who came in to help you?

25 A I would not say the latter.

1 I think that's sort of what happened; the way I
2 would characterize it, is that at the first meeting of the IAG
3 I said to the fellows, "I think we got three or four major
4 problems." I said, "One: We have got to begin to better
5 understand the potential state of physical disarray or
6 coolability of the damaged core.

7 "Two: We have got to understand what unique problems
8 we may have associated with the cooling system at that point which
9 contained a significant amount of non-condensable gas.

10 "Three: We have to figure out how we are going
11 to get from here to there; mainly something we are going
12 to construe is a confident and reliable cold shut down.

13 "Four: We have got a hell of a problem with
14 radioactive waste."

15 On Saturday afternoon I outlined those four areas
16 and I don't know if it was on a blackboard or a big white
17 piece of paper. I asked specific guys to take charge of
18 specific pieces.

19 I think I asked Zebroski to take hold of the
20 damaged core thing. I asked Levinson to take hold of the
21 heat transfer reliability. I asked Warren Owen to begin to
22 look at the questions and the procedures and the path that
23 we were going to follow in getting from here to there.

24 I asked Bob Brooksbank of Oak Ridge to kind of
25 take charge of the radioactive waste handling management

1 problem. I said to these guys, "Look, I don't know all of
2 you guys in great detail, and I don't know each of your
3 feelings of greatest knowledge, but I think you yourselves
4 know where you can best contribute to these four areas.
5 Conglomerate yourselves into the groups that are working on
6 these problems and go to work."

7 I said, "That is about as much as I can tell you
8 what to do." I felt I picked four knowledgeable good guys to
9 provide leadership and I think they did just that.

10 I think that group initially got started on what
11 I would characterize as these major general problems.

12 It was my impression then in my immediate encounters
13 with Stello, Ross, and Mattson that they were, you know,
14 concerned and aware of the same problems and were accessing
15 their own independent resources relative to those kinds of
16 problems. I think I also felt that they were working alot of
17 nearer term problems in terms of detailed immediate contingency
18 plans.

19 At that time, I was not as well plugged into the
20 group that Arnold and Herbein were working closely with. And
21 I guess was immediately headed up by Bill Lowe and Tom
22 Cremins and later had Dick Wilson added to it, which were the
23 sort of guys providing the closer end support to the plant.

24 I was not paying as much attention to what they
25 were doing. They were kind of being managed directly by

1 Arnold and Herbein to support the operations on the short-
2 range basis.

3 Q That is what came to be called the technical
4 working group?

5 A No, I don't think so. I think that is what was
6 called the technical support group in the later organization.

7 If you look at the organization chart, that
8 body was headed up by Dick Wilson's technical support group,
9 but that started out, you see, as the hard core of guys from
10 what we had sent in as the initial investigation team, then
11 immediately fanned itself into a sort of round the clock
12 direct operations support function with Bill Lowe, I think,
13 handling one 12-hour shift and Tom Cremins handling the
14 other, or something like that; and Dick Wilson then arrived
15 and began to provide additional support to that.

16 Q When was the technical working group set up?

17 A I will get to that. Let me finish first.

18 My impression then with the NRC was that they
19 were working alot of these contingency problems. They may
20 well have, in the first day or two, you know, then focusing
21 more specific on the immediate aspects of the plant; more
22 aligned with what Bill Lowe and the Tom Cremins' group were
23 doing. What became the IAG was working on these longer
24 term problems.

25 I would say that my impression is that everybody

1 was sort of working like hell to learn as much as he could to
2 understand as much as he could, to figure out as many uncer-
3 tanties, contingencies, fallback positions, future problems,
4 and the like.

5 In a sense, if we had a problem in that early
6 period of the first few days, we didn't have a mechanism
7 in place for sorting out the priority of those problems and
8 for combining our resources, allocating our joint resources
9 to those problems. There tended to be sort of a parallel,
10 not tightly coordinated effort on going there.

11 Again, on one hand that might sound critical, but
12 on the other hand I've got to say to you that I think that
13 is sort of the inherent way in which the first time you are
14 faced with something like that is going to develop.

15 You say when did we lay on the technical group?
16 We established an organizational structure on Wednesday, the
17 following Wednesday, which set forth an organization headed
18 by Bob Arnold with four segments under it. The technical
19 support group under Dick Wilson. The plant operations under
20 Herbein. The radioactive waste management -- I am not sure --
21 well, by that time, we had the other guys brought in from
22 Commonwealth and Duke. Frank Palmer stepped into that spot.
23 Brooksbank was helping him.

24 Then we set up another group with people from
25 Burns and Rowe to try and handle the emergency ad hoc

1 construction activities.

2 Q When you say, "We set up this group," who
3 basically laid out the structure, was it you or you and
4 others?

5 A By Tuesday night, I had gotten to the point where
6 I felt that I had a sufficient awareness of the major blocks
7 of effort and their priorities that I felt that I was able
8 then to start talking about an organization to handle those,
9 because up to that time things were in a very ad hoc state.
10 People were becoming somewhat restent because of the ad hoc
11 unstructured aspect of it.

12 I guess it was Tuesday night that Denton, on his
13 own, reached the conclusion that we needed extra support and
14 made the calls to arrange for Bill Lee and a couple of guys
15 from Commonwealth.

16 Wednesday morning Warren Owen and John McMillen
17 grabbed ahold of me and said, "Look, we have got to organize
18 this thing." We closeted ourselves and began to lay out
19 the organization structure that ultimately became established.

20 There were certain dynamic interplays between
21 myself and the other two guys. Those got resolved down to
22 this organization of those four major elements, plus a techni-
23 cal working group for the purpose of sort of providing a
24 coordination form plus the identification was somewhat
25 separate. The IAG group showing it plugging into the technical

1 support group headed by Dick Wilson, and have them sort of
2 be the backup longer hair technical assessment behind the
3 technical support group of the organization itself.

4 Q. Did you intend that the technical working group
5 would serve as basically Arnold's senior staff?

6 A. Yes. It was the mechanism whereby -- I am not
7 sure it ever worked in exactly the way in which it was con-
8 ceived, but I think as time went on the technical working
9 group and the Arnold staff meeting kind of fused together
10 and its purpose though was to provide the form for cross
11 functional review and approval of major initiatives, major
12 strategies, major decisions, major what have you.

13 Like the business of what is our plan for getting
14 from where we were to getting to go to cold shutdown. That
15 was a major piece of strategy with all of its procedures
16 and fallback positions related to it. That got hammered out
17 on Tuesday afternoon in a session that I personally led.

18 For example, if we were to make a change to that
19 plan, the technical working group was the mechanism whereby
20 that change would get cross functional review to provide
21 your self assurance that all the affected aspects of the
22 operation participated in that review and decision making
23 process.

24 I also personally took the initiative to invite
25 the NRC to be a directment of that technical working group and

1 had no problem with that whatsoever. I felt that was a
2 practical way to begin to better join our resources.

3 I think I also have to say that as soon as that
4 organization structure was brought forth and I reviewed it
5 in detail with Harold Denton, I think it was around 2:00
6 o'clock in the afternoon on that Wednesday, from that time
7 forward, the NRC also said, "Gee, we now also have a specific
8 organization structure."

9 It seemed to me that our composite organization
10 functioned a heck of alot more smoothly all of a sudden;
11 whether it was less sort of competition, less regulator,
12 regulatee, more of a combined composite approach to the
13 problem. Alot of things seemed to just all of a sudden fall
14 in place with the establishment of that organizational
15 structure.

16 I don't know what other factors might have
17 contributed to the kind of maturing of the relationship
18 that occurred on that time scale, but that is how I recall it
19 happening.

20 Q Did you spend a good bit of your time Sunday and
21 then the following days coordinating the IAG?

22 A Yes.

23 Q Were you the main point of contact between all
24 of these outside people and the GPU people, or did they
25 mostly go directly to the people who were interested in the

1 same problems with GPU?

2 A. In a sense I was, and in reality I wasn't.

3 Saturday night we kicked it off. On Sunday the
4 group met and we started on a path of having Dick Wilson
5 come in and brief these outside advisory group people on the
6 plant status and the problems we were dealing with and how
7 we saw them.

8 That effort on Sunday afternoon got interrupted
9 by the great hydrogen bubble.

10 Sunday night the IAG met with the NPC people from
11 the site here. The principle activity being the NRC people,
12 Denny Ross and Roger Mattson giving the IAG their view of
13 the state of things and their view of the critical problems
14 that we faced.

15 Joe Hendrie sat in on that session on Sunday
16 night. After that broke up there was a little more time
17 that I spent with some of the IAG members kind of refining
18 the activities and the thrust of where they were trying to
19 go and whether the IAG could or could not effectively function
20 in an area that went as deep into procedures as contrasted
21 with the technical analysis. I think there was a feeling
22 that the IAG didn't have the right kind of people to get as
23 close as procedures as such. That their role was better in
24 the sort of bigger picture analysis kind of an area.

25 Somewhere along the line, I guess Sunday night if

1 I have the timing right on this, Denton said, "My God, I
2 didn't see anybody from B&W at the IAG." I said, "I agree
3 with you. I don't understand what happened. I have a
4 committment from B&W to have people here."

5 I think what really happened to the B&W people,
6 had
7 because they/other people on the site, whomever from B&W
8 arrived just got co-opted into that activity on site. I
9 then called back, and I guess it was probably Sunday night,
10 to B&W and said, "Hey Goddamn it, you have got to have some-
11 body here, a higher level guy." Monday morning John McMillen
12 showed up.

13 During Monday afternoon, the IAG spent alot of
14 time interacting with John McMillen and a couple of his senior
15 guys sort of getting the B&W view of where we were and what
16 the problems were.

17 Monday night we met with Roger Mattson and Dennis
18 Ross, I think, for the purpose of reviewing the result of
19 this first interaction between B&W and the IAG. That ended
20 up really -- it didn't end up achieving that. It ended up
21 being alot of detail discussions as far as with Roger
22 Mattson on the subject of thermo couples and how they are
23 designed and what they look like and their measurements and
24 that kind of thing.

25 Tuesday morning Denton and I don't know if it
was Denton and Mattson, or Denton, Mattson, and Stello,

1 confronted me with the proposition that you guys don't have
2 a firm plan on how you are going to get from here to there.
3 I said, "I have to agree with you. We will be back tonight
4 at 7:00 o'clock with a plan."

5 Tuesday afternoon I closeted myself with McMillen,
6 Warren Owen, Bob Arnold, Dick Wilson and a couple more B&W
7 guys and we just hammered out point by point what is the plan
8 for going from where we are to cold shutdown. What is the
9 route we are going to take? What is the step? What is the
10 sequence? What is the rationale? What if this fails? What
11 do we do next if this fails? What do we do if the pump
12 fails? What were the fallback positions to that plan?

13 It took us about six hours to hammer that out.
14 There was alot of reluctance to sign up for a plan. There
15 was the sort of feeling that we have got alot more analysis
16 to do and I just hung in there with the things that if we had
17 to make the decision right now, what would it be, because
18 that is what we were faced with. That, of course, in turn
19 led to having in place in the control room, or at least to
20 a degree, having in place in the control room at all times
21 the fallback procedure.

22 We weren't in a position anymore to be in the
23 business as usual protracted review and approval processes
24 because if God decided to turn the pump off, we had to
25 have somebody there who knew what to do, whether it was

1 approved or not.

2 We put in place these procedures and their fall-
3 back procedures, while at the same time the NRC undertook
4 to do their own review of that and comment on it, and if
5 effect approve, if you will.

6 That plan then was reviewed in detail with Denton
7 and Stello, I think. I don't know whether Roger was there
8 or not on Tuesday evening.

9 Then it was on Wednesday morning we turned our
10 attention to organization and Wednesday afternoon that
11 organization was put into place.

12 In between time, yes I was acting as a messenger
13 boy, I was acting as an interlocketer. I did alot of cross
14 communicating with people at breakfast at the Holiday Inn,
15 hopping from table to table. We indeed had this problem of
16 trying to keep this group of people organized and focusing
17 on issues. At the same time, developing a sense of priority
18 of what were the things we really had to do.

19 One of the problems that I had or felt I had with
20 some of the NRC guys was a tendency to say, "Why in the hell
21 aren't you doing this? You can do that in three days. Why
22 in the hell aren't you doing this? You can do that in four
23 day. Why aren't you doing that? You can do this in one day."

24 I wasn't quite sure what the priorities really
25 ought to be. I may have appeared a little reluctant on some

1 of those items. What I kind of felt was a need to sort out
2 those priorities.

3 (Short recess.)

4 BY MR. FRAMPTON:

5 Q Mr. Dieckamp, just a couple of specific points
6 in the sequence of events that we jumped over that I want
7 to ask you about.

8 You spoke of a telephone call from Jack Wattson
9 at the White House on Saturday. Do you recall whether you
10 asked him or the White House for any support during that
11 phone call or at any other time?

12 A No. I think in that phone call he said to me that
13 he was the guy tagged with the responsibility to make whatever
14 national resources available that existed.

15 I did not -- I don't think I made any specific
16 requests.

17 Later when I heard of the President's visit on
18 Sunday, I did call him to make a specific request. In that
19 specific request I specified three things. I said, one:
20 I don't want any helicopter around the transmission lines
21 because they are absolutely vital and critical. Two: You
22 have got to control the traffic so we don't jam up the
23 ingress, egress to the plant. Three: I would like to have
24 you restrict the number of people in the party in the control
25 room to 15. He said, "We will absolutely do all of that."

1 I don't know whether the latter one was quite adhered to or
2 not in the sequence of events.

3 Q Do you know how and by whom the decision was
4 made on Saturday morning that Met-Ed, GPU would get out of
5 the press briefing business?

6 A Well, by that time I think I probably -- whether it
7 was Saturday morning or Saturday afternoon or just when it
8 was, I probably participated in that decision because it was
9 becoming apparent that there was alot of problems with the
10 press concentration on what they perceived as conflicting
11 statements.

12 I also felt strongly that the press demands were
13 an excessive call on Jack Herbein's time and energies.

14 So I said I thought that we should withdraw from
15 -- I guess by that time it was also apparent that the NRC
16 was going to be having standup briefings and I said we should
17 withdraw from the daily standup briefing. That if we have
18 got something to say, perhaps we should put out once or twice
19 a day a brief written statement, but that we should try to
20 minimize this opportunity for press concentration on appear-
21 ances of conflict.

22 I just didn't feel that was serving any good
23 purpose so I felt that we should modify our approach.

24 Q Had you received any pressure or suggestions from
25 the NRC or the White House prior to that decision being made

1 to take that step?

2 A. No. I never had any conversation about it from
3 the NRC.

4 I did get a phone call from Jack Watson saying,
5 "Hey, these conflicting press stories have got to stop."

6 I then told him, "We have already decided to cease
7 the daily standup briefings which are the source of alot of
8 that." On one hand he told me the importance of not feeding
9 those conflicts but by that time we had already made our
10 own decision as to what we felt was the proper thing to do.

11 Q. I just want to put on the record a short discussion
12 we had during the break about how you went about calling
13 people and identifying needs from outside your own organization
14 on Friday the 30th.

15 Is it fair to say that as of Friday you weren't
16 able to identify alot of the specific needs that you had, but
17 rather called the people for general restraints and abilities?

18 A. Yes. The calls were not in relationship to
19 clearly defining specific tasks, but rather a feeling on my
20 part that the tasks were of such a general magnitude and sort
21 of yet to be defined scope that we needed people with strong
22 basic backgrounds, rather than narrow specialties.

23 Q. When you arrived here on Saturday afternoon or
24 evening, I think you said that you had a meeting with Mr.
25 Denton and possible with Mr. Stello that night. Do you

1 recall such a meeting?

2 A. I am not clear on that. I may well have. I don't
3 recall saying that I had one with them on Saturday.

4 Q. I may be mistaken about that.

5 A. I may have had one, but I just don't relate to it
6 right now.

7 Q. In the first meeting that you had with Denton and
8 Stello and that group, whether it was Saturday evening or
9 Sunday, what conversations did you have with them about what
10 the NRC's role was going to be in overseeing or possibly
11 vetoing any major plant actions?

12 A. I don't recall any specific conversation about
13 that. I don't recall any assertion from them as to what
14 their role was going to be. I guess I didn't even conceive
15 of it as an issue. I had no trouble in my mind accepting
16 from the outset that this was an unusual situation.

17 We clearly were not talking in terms of operating
18 in strict relationship to technical specs which were drawn
19 up for a different set of conditions. We understood completely
20 and just implicitly that this was a situation where we
21 needed to be glued together.

22 Q. So you assumed then that the NRC would be in the
23 loop and any major decision making?

24 A. Certainly that was my assumption. I think I have
25 to say I can't specify a cutoff level where the plant

1 operated within its perceptions of its authorization versus
2 where we would feel that there is an item of sufficient
3 importance that we would have to ourselves take the initiative
4 to insure that we had the NPC on board and approving. I
5 think I have got to believe that interface between the
6 nickel and dime items and the more significant items that
7 had to develop with time was not clearly articulatable
8 at the outset.

9 Q Let me turn now to the question of the issue of
10 whether unit two was improperly rushed into commercial
11 operation prior to the end of calendar, 1979 (sic) in order
12 to realize a certain financial tax or other benefits for the
13 company.

14 As I said before we started, this is an issue
15 that has been raised in the press and in the public. It is
16 an issue we are looking into. I don't believe we have any
17 predisposition that we would like to try and get as many of
18 the facts as we can and call the evidence one way or another
19 if we are able to do that at the end of our inquiry.

20 I know you have testified about this subject at
21 some length elsewhere and I will try and not simply repeat
22 that.

23 Let me begin by asking you this: I think you had
24 said before that you were aware that any tax advantages that
25 might accrue to the company in 1978 did not necessarily

1 depend on the plant being declared into commercial operation
2 by the end of the year as you understood the perhaps rather
3 vague tax criteria that were used, is that correct?

4 A. I was aware or made aware of the tax case that
5 indicated prior precedent for allowing, and I don't know
6 whether it is the tax credit or the accelerated depreciation
7 half year convention; based upon a condition of the plant
8 being ready to operate, I think might have even been the
9 words in the ruling, as contrasted with depending upon some
10 specific declaration of its being in commercial service.

11 Q. Do you remember what the source of your awareness
12 of this was?

13 A. I think it was brought forth by the GPU controller
14 or his tax people who looked into this question.

15 Q. Do you recall whether there were discussions about
16 the subject during the latter half of 1978 in which you
17 participated?

18 A. Yes, there were discussions.

19 Q. Where do you recall that the people who talked
20 to you came down on this issue, if they did? Did they say
21 it is our opinion that we probably wouldn't have to actually
22 go commercial according to the existing criteria and rulings
23 or that we would? What was communicated to you as the
24 bottom line on this?

25 A. It was my understanding that it was their judgment

1 that plant had long since met the minimum criteria consistent
2 with the tax codes.

3 Q By long sense, you mean some time in the spring
4 of 1978?

5 A I don't know whether it was exactly the spring.
6 It was at some point back towards the middle of the year,
7 late in the spring, middle of the year. I don't recall a
8 specific date, but long since meaning not last week or two
9 weeks ago, but several months before that time period of the
10 discussion.

11 Q Do you remember whether there was any concern that
12 if the plant had apparently qualified in the spring that that
13 might be jeopardized by the down time over the summer to
14 replace the valves?

15 A I don't recall that kind of a thing, specifically.
16 I do recall some discussion of the case where the plant had
17 only operated for the briefest period of time and then was
18 down for a significant length of time. I think in that case
19 the tax treatment was disallowed. That is my recollection.
20 There was, you know, a degree of judgment involved in terms
21 of what degree of operability is really required to justify
22 or to qualify for the various tax treatments.

23 I don't think that is very specifically stated.
24 It is sort of implied from these rulings rather than being
25 a statement of a specific set of criteria. It is easily

1 measurable.

2 Q This is something you recall knowing during 1978?

3 A Yes.

4 Q Do you recall whether there was any reconsideration
5 of the question of whether unit two would actually have to
6 go commercial before qualifying for the tax benefits in
7 December of 1978?

8 A I don't have any recollection of a specific
9 reconsideration.

10 MR. FRAMPTON: Off the record.

11 (Discussion had off the record.)

12 MR. FRAMPTON: I would like to have marked as
13 Exhibit 18 of this deposition a one-page memorandum with
14 an attachment dated December 28, 1978 entitled Status of
15 TMI, Number Two for Income Tax Purposes.

16 (Whereupon, the memorandum entitled Status of TMI
17 Number Two for Income Tax Purposes was marked as Exhibit
18 Number 18.)

19 BY MR. FRAMPTON:

20 Q Mr. Dieckamp, that document indicates that it
21 was sent to you among other people. Do you recall getting
22 the document and reading it?

23 A I don't have a specific recollection of this
24 document. I do have this recollection of some uncertainty
25 about the degree of readiness for operation if necessary to

1 qualify and I gather --

2 Q In late December?

3 A Yes -- I gather this document brings forth a
4 case where the tax treatment was questioned because of the
5 degree of operability at the plant.

6 Q Along the lines that you mentioned before?

7 A Yes.

8 Q Do you recall if the specific subject that is
9 covered by this memorandum was discussed by you in late
10 December with anyone?

11 A The specific item in there that says something
12 about two more tests need to be accomplished in order to do
13 something or the other?

14 Q Right.

15 A I don't have a recollection of that.

16 Q I believe that unit two was resynchronized with
17 the grid sometime in mid or late September of 1978, is that
18 correct?

19 A Whatever that date is. That ought to be a part of
20 record.

21 Q Approximately?

22 A Yes.

23 Q Do you recall any discussions after that to the
24 effect that the tax advantages would be available or tax
25 treatment would be available based on the continued operation

1 of the plant after the September resynchronization regardless
2 of whether it might have been available on the basis of the
3 plant's operation back in March and April?

4 A. I don't have a recollection -- again, a specific
5 discussion that says here is a specific milestone that now
6 does or does not enable the tax. I rather have an impression
7 of kind of a general judgment relative to operability.

8 Q. What was that general judgment?

9 A. Well, in relationship to the other tax reference
10 which describes the degree of operability of that plant or
11 says -- I think it uses words to the effect of ready to
12 operate or something.

13 I guess what I'm saying is, I don't have any
14 impression of judgments having been made on the basis of
15 specific milestones. I would rather have impressions of
16 people having been asked, does the plant seem to conform
17 with the kind of language in this other ruling that says
18 basically ready to operate.

19 Q. When you are talking about the other ruling, you
20 are talking about the revenue ruling?

21 A. Yes. The other case, whatever you want to call
22 it or whatever you should call it.

23 Q. Do you recall whether there was any discussion of
24 this subject at a meeting of the GPU or GPU Service Company
25 Board in December of 1978?

1 A. Yes.

2 Q. Was Mr. Arnold there during that time?

3 A. I think so, yes.

4 Q. What do you recall about the conversation or
5 conversations on the subject at that meeting? Who said what
6 to whom about this?

7 A. I can't reproduce that. I think I have the
8 impression that at that meeting there were statements or
9 discussions to the effect that Bob Arnold, who in looking at
10 these criteria -- I shouldn't use the word criteria, descrip-
11 tions of ready to operate or operability felt that the plant
12 had already met those kinds of conditions.

13 Q. Prior to that meeting?

14 A. Prior to that meeting, yes.

15 Q. Was he showed a revenue ruling or a list of
16 criteria to your recollection?

17 A. I don't have a recollection of that having been
18 an official piece of the meeting where somebody grabs this
19 and gives it to Bob Arnold and says, "What about that?"

20 I have the impression that perhaps somewhere in
21 a side bar discussion this was reviewed with Bob.

22 Q. But you do have a recollection of that happening,
23 of his looking at some criteria and giving a judgment based
24 on his review?

25 A. Yes.

1 You know, having said in my opinion him not being
2 a tax lawyer, but in my opinion the operations of the plant
3 are consistent with what is described here as operable or
4 operability.

5 Q This December 28th memorandum, Exhibit Number 18,
6 seems to reflect a slightly different outlook on that. An
7 outlook that suggests that in order to make sure of getting
8 the desired tax treatment you would want to make sure to go
9 commercial in 1978. Do you recall whether this surprised
10 you or you took any particular notice of that?

11 A I didn't take any particular note of that. Again,
12 I had this impression that the criteria -- again, I hate to
13 use the word criteria -- the description is alot more
14 general than what that memorandum would suggest in terms
15 of specificness of completion of specific tests.

16 Q Do you recall whether anyone else who was a
17 recipient of this memorandum of December 28th expressed
18 any views about it to you or discussed it with you?

19 A Discussed what?

20 Q The memorandum or the views expressed in it.

21 A I don't recall a discussion of that memorandum.

22 Q Do you recall the discussion of this point of
23 view, namely that it still would probably have to go com-
24 mercial in order to make sure of getting the tax treatment?

25 A I think it is fair to say that at some point in

1 the discussion, it may well have been characterized as saying
2 if the plant is commercial, there will be little question
3 about it. I don't recall that as having been stated as the
4 limiting necessary and sufficient condition.

5 Q Are you talking about a discussion at the board
6 meeting or a discussion at or about the time this memorandum
7 was circulated?

8 A Again, I don't recall any discussion at the time
9 of that memorandum. I recall the discussion at the time of
10 the board meeting and I recall the content there being the
11 fairly broad characterizations necessary to qualify. I
12 recall the judgment that, "Yes, we had met that level of
13 qualifications."

14 I recall somewhere along the line of having been
15 sort of made aware of another ruling that tended to undercut
16 that by citing the example at the plant that operated only
17 for a short period of time.

18 I think in my mind that was a very exaggerated
19 case because that plant had operated for an extremely short
20 period of time at a very low power level.

21 I don't think that I personally felt that I was
22 making the judgment as to whether we did or didn't meet
23 the tax criteria.

24 MR. LIBEPMAN: I think by inadvertent, Mr.
25 Frampton, you referred to the memorandum as saying it had

1 a reference to commercial operation. As I look at it, it
2 doesn't unless I am missing something. It talks about passing
3 some test, but it doesn't talk about what has come to be
4 known as the elusive term "commercial operation", correct?

5 MR. FRAMPTON: Yes, you are correct.

6 Let me pursue that a little bit.

7 BY MR. FRAMPTON:

8 Q I understand that a nuclear power plant does not
9 have to go through the complete power essention test schedule
10 required by the NRC and be qualified to operate at full
11 power rating in order to be declared commercially available,
12 is that your understanding?

13 A Well, I think in general terms that is true. One
14 does not find in any regulations or any literature a state-
15 ment to the effect that those are the criteria for commercial.

16 I must say that we were keenly aware that in the
17 rate making process the question of whether the plant was
18 or was not commercial was an important question and that we
19 took steps to try to, well in advance, describe to the
20 commissions the purpose of the test program and the kinds of
21 things that would be accomplished. The discipline or vigor
22 with which they would be accomplished before we would declare
23 the plant commercial because we felt we did not want to be
24 in a position where someone would later say, "Well, you just
25 willy, nilly declared it commercial for rate making purposes."

1 We wanted to say, "No, it is a definite plan that
2 we will have gone through in order to declare it commercial."

3 I think it is also proper to say that this is
4 probably the most explicit that we have ever been in that
5 regard.

6 Q In fact, GPU -- the GPU system had had a plant that
7 went commercial at 60 percent of its power, had it not?

8 A Yes.

9 Q But in the case of Three Mile Island, unit two,
10 you had made some representations or had some communications
11 with the Public Utility Commission in Pennsylvania to the
12 effect that you would not declare the plant in commercial
13 operation until you had completed the full test sequence
14 that you had mapped out and that the NRC requires, isn't
15 that correct?

16 A I would have to let the letter stand on itself
17 in terms of its own merits, in terms of the specific degree
18 of commitment. I haven't looked at the letter in a few months
19 so I don't recall exactly what it says in terms of that we
20 won't do this before that and if it says that, fine.

21 Q What was your understanding --

22 A It was my understanding that it was our intention
23 to conduct that program before declaring the plant commercial.

24 We felt that there was so much uncertainty on the
25 part of alot of parties about what was meant by commercial,

1 what was the purpose of declaring it commercial, what was
2 the impact of declaring it commercial, that we felt it was
3 in our interest to try to articulate all those factors to
4 the commission so as to provide a basis. When we later went
5 in saying that the plant was commercial and asking for a
6 rate making treatment, that we could say, "Look, this has
7 been the program, this is what we said we were going to do
8 and what we intended to do. This is the degree to which we
9 have done that."

10 Q Did you yourself regard this as a firm plan?

11 A I regarded it as a firm plan, but I also felt
12 free to exercise some judgment about that plan and I think
13 just a specific example of that is that we declared the plant
14 commercial even though it had not -- you know, what was it?
15 I think it was at 98 percent power when we declared it
16 commercial. It had been at 100 percent for a rather brief
17 period of time.

18 I felt free and comfortable in making the judgment
19 that that differential was not significant in terms of what
20 we were trying to demonstrate and accomplish.

21 Q Was it your understanding that you had made some
22 kind of a commitment to the PUC in Pennsylvania, whether
23 that commitment was revocable or not, to wait till you finished
24 the testing program before declaring the unit in commercial
25 operation?

1 A I am having trouble in terms of black and whiteness
2 of committment.

3 I personally felt and personally felt that it was
4 in our best interest, to conduct the program in a way so
5 that there could be the least question about whether the plant
6 was qualified to be declared commercial. I personally then
7 felt that adherence to our prior statement of intention of
8 the plan was the best way to minimize any downstream arguments
9 about whether it was or was not commercial.

10 Let me just say that I have trouble accepting
11 the word committment when we indeed departed, but I don't
12 think we departed in terms of the intent or the insignificance
13 of what we said we were going to do. We essentially adhered
14 to our plan.

15 Q Would it be fair to say that representations were
16 made that that was your plan?

17 A Sure. I guess, again, the letter speaks for it-
18 self.

19 Q What conversations can you recall having with
20 Mr. Arnold in the second half of 1978 about the desirability
21 of going commercial before the end of the calendar year,
22 if any?

23 A I don't recall any exact dates or any exact
24 subjects or things like that.

25 I would have to say that I felt that we did have

1 a schedule for taking the plant commercial. I think we did
2 have a feeling that we wanted to achieve that milestone,
3 you know, relatively early on.

4 I am sure that there was some suggestion that we
5 would like to accomplish that before the end of the year. I
6 am also sure that in those conversations with Mr. Arnold I
7 told him explicitly that the staff was not to depart from the
8 requirements of the test program; in fact, they were not to
9 depart from doing things in accordance with their own judgment
10 for the simple purpose of achieving the schedule.

11 Q When do you recall telling them that, as best as
12 you can place it?

13 A I am sure I had the same kind of conversation
14 with them two or three times over that time period of the
15 fall and winter, which had the general content that says,
16 "Yes, we want the schedule removed. Yes, we want to complete
17 the program. By all means we should not sacrifice doing the
18 job right."

19 Q Why did you feel that it was necessary to say that
20 to him?

21 A To make sure he understood the relative importance
22 of conducting the program properly and safely in relation-
23 ship to schedule.

24 I think one side of discussion about schedule only
25 might not have conveyed the proper emphasis.

1 Q Did you have any belief or view or concern that
2 without that kind of caveat from you he might feel some
3 undue pressure to push ahead with the test schedule?

4 A I had no reason for concern. I felt it important
5 to make sure he didn't imply some pressure that I didn't
6 want to convey. I felt it was important for me to be
7 explicit about that.

8 Q Do you recall any further about any discussions
9 with him on that subject or do you recall what his response
10 was in any of these conversations?

11 A I don't know that there was any specific response.
12 There certainly was no argument. I think if anything, I
13 would characterize it as one of saying, "I understand."

14 Q Did you ever have any discussions with him about
15 the specifics of the time schedule in terms of whether it
16 could be shortened, telescoped, or whether any tests that you
17 had planned to do that were not required by the NPC could
18 be postponed?

19 A No, to the contrary. I at no time ever suggested
20 deletion of the test. If anything, and again my memory --
21 you would have to look at the record on this, I have a
22 recollection of suggesting that the time at power be reason-
23 ably substantial in terms of the number of days, not just
24 the one hour or one minute, but that there be a reasonable
25 period at power again so that it was not just a fleeting

1 accomplishment.

2 I am unaware of how many days it had actually
3 been operating when we did declare it commercial. Again,
4 you can check the record on that.

5 Again, that was a matter of judgment as to how
6 many days you would be at full power. What did we say in
7 the letter to you? Do you have that letter?

8 MR. LIBERMAN: I furnished it to the gentleman.

9 THE WITNESS: I think the letter said four days.

10 MR. FRAMPTON: Off the record.

11 (Discussion had off the record.)

12 BY MR. FRAMPTON:

13 Q Do you recall any conversations with Mr. Herbein
14 about the desirability of going commercial before the end of
15 the year and the relationship between that desire and the
16 test schedule?

17 A I am not sure. I think I might have talked with
18 Herbein once about the status of the test program and where
19 we were.

20 In general, these kinds of discussions were
21 dominantly with or through Bob Arnold.

22 Q Do you have any recollection of saying to Mr.
23 Herbein in substance, "We would like to go commercial before
24 the end of the year, but we don't want to rush it. And if
25 we don't make it, we don't make it"?

1 A. I have no trouble saying that that is consistent
2 with what my position was. If I did say such a thing to
3 Herbein, that would not surprise me. I don't recall a
4 specific occassion of having done that. If Jack recalls that,
5 fine.

6 Q. In your own view, what were the major advantages of
7 going commercial before the end of the year or the major
8 reasons why it was desirable?

9 A. Well, I don't know that in my own mind I attached
10 extreme importance to it even though I think it was our
11 general feeling that that would be the preferable case.

12 I saw in the trade off as involving the impact on
13 income if we declared the plant to commercial too early in
14 relationship to receiving rates to cover the cost versus
15 the risk of the plant of going commercial sometime beyond
16 the end of the rate making test year for one of our cases.

17 That to me was the trade off. I think from my
18 own personal view of that was that I was more concerned about
19 the earnings attrition from declaring it commercial before
20 the rates were in effect than I was a few days or weeks
21 beyond the test year in the Penn-Elec case. That was my
22 own sort of weighing of some of these considerations.

23 Q. Let me ask you to explain for the record the
24 disadvantage of declaring commercial well before you receive
25 approval to include the entire unit in the rate base.

1 A. Well, the declaration of the plant being
2 commercial in accordance with the FERC accounting principles
3 really signals the change in the accounting for the plant.

4 At that time one ceases to capitalize returns
5 on the capital employ, one begins to charge operating an
6 maintenance expenses directly to income and stopping to
7 capitalize those. One begins to take depreciation on the
8 investment and so to the extent, those expenses are recog-
9 nized in the income statement and are not either taken --
10 not taken or capitalized; one impacts on the company's
11 earnings very directly until such time that rates are in
12 place to provide revenues to offset those costs.

13 Q. Let me go back to see if I understand this.

14 Before the unit is declared commercial, there
15 are certain costs of the test program which can ultimately
16 be capitalized and put into a rate base?

17 A. Yes.

18 Q. Those include both the cost of money and the
19 actual cost of operation or some of the actual costs of
20 operating the plant during the test period?

21 A. Most of the costs of construction, operation,
22 maintenance that is going on, start up test program, as
23 well as the allowed cost of money both for the borrowed
24 funds as well as the equity portion of the investment.

25 Q. When the unit is declared commercial, after that

1 point in time under FERC rules, those expenses are no longer
2 eligible to go into the rate base for FERC purposes, is
3 that right, for wholesale rate purposes?

4 A. Without getting too narrow about it, I would say
5 in general the requirements are that those expenses no longer
6 be capitalized but be incurred currently in the operating
7 income statement.

8 The question of rate base, I think, you have got
9 to watch that terminology. That is why I say capitalized.
10 While it is an investment, we usually say it is rate base.
11 When a regulatory commission has accepted that investment
12 as a basis for determining rates.

13 Q Is it your understanding that the State Public
14 Utility Commission usually gives you rate relief based on
15 the additional plant as of the date it decides to do that,
16 or as of the previous date on which it decides that the plant
17 was eligible for such treatment?

18 A. I think the record on that is extremely clear. It
19 is if and when they get around to it, and that is a very
20 difficult problem. I think you can look at the record on
21 Three Mile One, Homer City Three. Whatever major investment.
22 In general, there is a delay between the time that that
23 plant goes into service and those costs are no longer
24 capitalized and the time which rates are granted to compen-
25 sate for those costs.

1 Q. You suggested in the deposition taken by the
2 President's Commission that in the interim period, there is a
3 danger of losing the benefits of the operating expenses and
4 the interest costs, the cost borrowed, but in this time
5 period between declaring commercial and getting rate relief,
6 can you explain how those expenses are considered operating
7 expenses?

8 A. Those expenses are not benefits.

9 Q. Getting credit for them in effect?

10 A. I think what I said there, once incurred those
11 expenses are never recovered. Once they are gone, one only
12 achieves rates -- maybe I should say normally achieves the
13 rates prospectively. Once the rate order is handed down
14 and the extent to which the revenues match the expenses to
15 make you whole, you are okay. The prior absence of revenues
16 to offset those expenses is never recovered. That is lost
17 forever. I think I said to the President's Commission that
18 for that reason and when plants have significant expenses
19 and significant levels of investment involved in them, a
20 major incentive or major objective that we have is to try to
21 plan ahead so as to synchronize the rate making and the
22 date on which the plant goes into service.

23 Q. I think in some earlier testimony, public testimony
24 before the President's Commission, you mentioned that one of
25 the reasons for wanting to get into commercial operation in

1 1978 was the testing or potential problem with the test year.

2 It is my understanding that only one of the three
3 operating companies had a test year, the end of which co-
4 incides with the end of calendar '78, is that right?

5 A. I think that is right.

6 Q. You were aware of that at the time?

7 A. Yes.

8 Q. By the time, I mean in late '78.

9 A. Yes.

10 Q. Can you describe why it would be desirable to go
11 commercial within the test year with respect to that utility's
12 pending application?

13 A. Yes. It simply eliminates a technical argument
14 as to whether or not those expenses should be recognized
15 in the rate making.

16 However, you can also look at the record and I
17 think you will find that many commissions permit rates to
18 go into effect and recognize plants that have come into
19 being modestly beyond the test year. It is a very pragmatic
20 thing.

21 It would be extremely disadvantageous if you
22 waited until your test year could reflect a full year of
23 expenses for that plant.

24 What that means is that you would have the entire
25 duration of the rate case with no revenues for those expenses

1 so you almost end up with a requirement for some normalization
2 to adjust the test year expenses to reflect what they would
3 be had the plant been in service as well as any other offsets
4 that may be incurred because of the plant being in service.
5 Then you get into the question of regulatory practice,
6 precedence and the like as to the degree to which the
7 commission will reach out and recognize a plant which is not
8 yet in service in that process.

9 But as such reaching out is done, the business
10 of having the plant commercial during the period of test year,
11 in my mind, simply closes or constrains the opportunity for
12 a very, very narrow technical argument to not reach out
13 and normalize for those expenses.

14 Q What would the technical argument -- what result
15 would the technical argument have if it prevailed? In other
16 words, if you had gone commercial on January 5th and the PUC
17 said, "No, no, you did not make the test year," what would they
18 do; would they set up a new test year of June to June or
19 something like that? What would be the possible --

20 A I think if you looked at the -- if indeed it
21 happened exactly that way, certainly there would be a signifi-
22 cant impact until such time as that plant was filled -- on
23 the other hand, if you look at the practices, I think in
24 fact the Pennsylvania Commission has made statements about
25 their willingness to reach out and recognize the plants that

1 are not yet in service. There is a limit to that.

2 Any number of things can be done to adjust for
3 that. We, in effect, went through that because we originally
4 were planning that the plant would be in service by May 31st.
5 It was necessary to kind of recycle one of the cases in order
6 to bring it into coincidence with the plant going into
7 service.

8 Q Do you recall any discussion about whether it would
9 be desirable to have the plant in commercial service prior to
10 the oral arguments before the PUC that were scheduled for
11 mid-January, I believe, of '79?

12 A We may have talked about that kind of thing. I
13 can visualize it as being the kind of thing we would recognize
14 as a factor.

15 Q So you wouldn't be surprised if it was recognized
16 but you don't recall conversations about it?

17 A I don't recall a specific one that was set up on
18 a date based on that basis. Again, it gets back to the point
19 in my mind that says, "We are involved in a process that
20 has certain opportunities for technical argument and we would
21 like to minimize our vulnerability of those technical
22 arguments."

23 Q Was there ever any meaningful concern about whether
24 failing to make the FERC Rule 9D deadline might actually
25 result in disallowance of some of these expenses? That rule

1 requires you to make a report in explanation if you don't
2 meet the 120-day deadline.

3 A. Yes.

4 Q. Was there any concern that some expenses might
5 actually be disallowed if the time period dragged on too long?

6 A. Certainly that is a concern. I think my own
7 impression of that also is that we, on occassion, sensed
8 that the regulators, the state regulators, would like for us
9 to defer completion of the project and continue to capitalize
10 costs and not recognize the cost of the rates. The FERC
11 guidelines of 120 days also constitutes an argument as to
12 why you cannot or should not continue to defer coming to
13 grips with the issue of declaring the plant commercial.

14 Q. When you say the state regulators, is it the
15 state regulators or the company that has an incentive to try
16 to capitalize as many of these test expenses as possible?

17 A. The company has an incentive to convert capitalize
18 earnings to true earnings as early as possible. The regulators
19 seem to have a desire to delay coming to grips with the issue.

20 Q. The rates may be higher due to the delay?

21 A. Yes. You will find in the record cases where they
22 have suggested that the absence of rate making is not impor-
23 tant because one can just go ahead and capitalize these
24 expenses.

25 Q. Was that a perceived position of the Pennsylvania

1 PUC on your part?

2 A We were concerned about the Pennsylvania Commission's
3 behavior in this regard. I think their behavior in the
4 Philadelphia Electric case on Salem One was a good indicator
5 of their preferences or their thinking so as to say I felt
6 in my mind that the importance of the FERC standard or the
7 FERC criteria on 120 days was a basis to suggest to the
8 regulator why we needed to come to grips with this matter
9 and could not in turn delay the rate making process.

10 Granted, if we had engaged in that game planning
11 of delaying the coming to grips with it and appearing to
12 be happy because of the capitalizing expenses, we would have
13 then opened up a vulnerability to a later disallowance on
14 the FERC audit.

15 Q What penalties or disadvantages, if any, was
16 GPU or the operating companies suffering as a result of not
17 having met the original commitment to go on line in May
18 or June of 1978.

19 A I don't recall that we were suffering anything
20 significant relative to the pool. I am sure there may have
21 been some capacity payments because of the absence of this
22 generating capability for GPU, but that is not an extremely
23 large quantity. I think that was running 20 at that time, 22,
24 \$25 a kilowatt year.

25 Q But that was not in your view a substantial

1 incentive to get the plant commercial compared to various
2 other measures one way or another?

3 A. No, I don't think so. I am sure all nickels add
4 up to dollars and what have you, but I would not in my mind
5 have identified that as an overriding consideration.

6 MR. FRAMPTON: Off the record.

7 (Discussion had off the record.)

8 (Short recess.)

9 BY MR. FRAMPTON:

10 Q. Mr. Dieckamp, do you recall making any calls to
11 people at EPRI on Thursday, Thursday night, about getting
12 some help to Milt Levinson or Mr. Zebroski or anyone else?

13 A. I might have. I think I was in contact with them.
14 I don't know whether it was Thursday night or Friday morning,
15 I really don't.

16 MR. LIBERMAN: Off the record.

17 (Discussion had off the record.)

18 BY MR. FRAMPTON:

19 Q. We were speaking before about the IAG. How did
20 the results of the group's work or of the various groups'
21 work get input into the operations?

22 A. That input came mostly, I think, a number of ways.
23 I suspect it really did not start having a significant affect
24 until we set up the organization and people like Zebroski and
25 Levinson sat in on the working group -- technical working

1 group and began to make direct input there. Then as time
2 went on, other people, and I don't know whether that
3 started exactly on Wednesday or Thursday, but people began to
4 do things.

5 I think that for the first several days the role
6 of the Industry Advisory Group was one getting up to speed
7 and beginning to look at some of the longer range issues and
8 later began to do specific things like planning for natural
9 compaction, doing some diagnostic work on looking at the
10 self-powered neutron detectors, Ackerman hooking up this or
11 that or other things of that sort began to get in.

12 I don't think in the early days they did not have
13 a significant impact on the direct operations.

14 Q. When they did have more of an impact, how was that
15 structured? Was it through Bob Arnold or you?

16 A. No, it was direct from Levinson sitting on the
17 technical working group of the organization and its daily
18 meetings. Then by setting up, you know, sort of collaborations
19 for working arrangements between specific people in the
20 Industry Advisory Group and the plant staff people that were
21 concerned about something.

22 When you look -- in my mind, and again just kind
23 of a summary about it, the role of the IAG, that sort of
24 surfaced early on, was the added confidence that it gave
25 both us and the NRC that there was a separate set of guides

1 with a recognized degree of competence that were looking at
2 some of the problems and coming up with some independent
3 impressions and judgments and anticipations.

4 I think it was that rule in let's say the first --
5 let's say you had two or three days of getting up to speed
6 and then you went into this phase of some added confidence
7 from the presence of these extra analysis, advisors, antici-
8 pators, then you went into a later phase of more detailed
9 interactions of Ackerman hooking up this or that, a tempera-
10 ture reading; or Zebroski talking to somebody to dig out
11 some data about reconstructing the core damage or Levinson
12 and others, Leavy, getting very specific in consulting on
13 the transition to natural convection and the anticipation
14 of how that was going to go and those kinds of things.

15 You mentioned earlier about the comment about
16 whether the industry ought to have such a thing set up
17 ahead of time. I think one, in order to do that effectively,
18 one has to assume that our experience here would constitute
19 a model and the benefit of having some kind of a prearranged
20 situation would be to kind of anticipate, provide earlier
21 awareness of what spectrum of skills you wanted, what kind
22 of basic organization you ought to have, what kind of people
23 would be able to move in and provide leadership. It would
24 not take as long to develop a sense of priorities and a
25 sense of structures that was necessary to get there.

1 Maybe there was somebody that was a much better
2 crisis manager than I happened to be or whoever else happened
3 to be that could have done this in one day instead of three
4 or four, but that is how long it took us in this case. I
5 think the objective, the next time around, would be to
6 compress that time scale to get to the point where such added
7 resources were useful and meaningful and helpful.

8 Q Are you aware of any cutback in maintenance or
9 decision not to increase the maintenance budget or effort
10 in the time frame of December, '78 or early '79 with respect
11 to unit two?

12 A I am not aware of anything in terms of specific
13 details or specific numbers or specific people or activities.
14 I am clearly aware that at all times we are trying to look at
15 the budgets for our major activities.

16 I am also keenly aware that because of the costs
17 that we were experiencing, we made an effort to analyze
18 our cost experience with that of others in the industry to
19 the extent we could by accessing the FPC form something or
20 other, which reports these costs. We were always concerned
21 about whether these costs were uniformly reported under the
22 same ground rules so that the comparisons were meaningful.

23 We derived the impression that we were among the
24 higher plants, whether it was Oyster Creek or Three Mile
25 Island, we were among the higher organizations in terms of

1 the amount of money that we expended on operating and mainten-
2 ance for the plants.

3 We also felt that our plants had an outstanding
4 capacity factor of records. I personally felt to the degree
5 that those expenditures contributed to those capacity factor
6 performances, we were doing the right thing, but I couldn't
7 prove that there was a one to one correlation between those
8 two.

9 Q So you are not aware of any overall cutback?

10 A I am not aware of a specific cutback. I am sure
11 we had budget restraints and pressures.

12 Again, we attempted to assess those in relationship
13 to the experience and practices of others.

14 By the way, there is a GPU report on that subject
15 where we attempt to correlate or compare our experience with
16 that of others.

17 MR. FRAMPTON: Off the record.

18 (Discussion had off the record.)

19 MR. FRAMPTON: For the record, we have just
20 requested to see if we can get a copy of the document that
21 the witness referred to.

22 BY MR. FRAMPTON:

23 Q Mr. Dieckamp, one of the things that we have
24 certainly --

25 A You know -- let me just back up for a minute. I

1 think at the last management and review meeting the comment
2 was made about O&M restrictions and cutting back on simulator
3 training in order to, you know, reduce expenses, at which
4 time I said, "No, we will have annual simulator training;
5 don't go to the once or every two year side." You know, we
6 were trying to balance those things.

7 Q One of the things that we have certainly tentatively
8 identified as a serious problem has been highlighted by the
9 accident here is that neither the industry nor the government
10 seems to have done a very good job in the past of evaluating
11 operating experience and getting information that can be
12 learned from that experience back to the people who need it.
13 In particular, nobody has really heretofore thought about
14 setting up a system that would be effective in weeding out
15 the important information from all of the unimportant
16 information and seen that it gets to the right place.

17 In a prior deposition, you had some pretty
18 interesting things to say about the advantages of having what
19 you would call an operations analysis type person working
20 for you to look at your own operating experience and other
21 people's. I wonder if you have some thoughts about what the
22 utility company -- the utilities can individually do in this
23 area and how they might go about doing it and what they
24 can't do; what is it, if anything, that is better done by
25 industry as a whole or by the NRC or the government of somebody

1 else?

2 A. Well, you put your finger on alot of the pieces
3 of it and I did elaborate on some thoughts for the Kennedy
4 Commission deposition and I continue to feel that that is
5 an extremely important piece of learning. I would character-
6 ize it as none of us having recognized the importance of
7 using operating experience as a source of development of
8 a sense of values for the maturing of the technology. I
9 think it becomes complicated because you said a key thing
10 when you said prioritize and you also used a key thing in
11 terms of sorting out and identify which things are important
12 and not important.

13 I think there is also an opportunity here for
14 alot of loss if you end up with alot of duplication. I
15 think it might not be best if everybody tried to do it for
16 themselves.

17 The kinds of thoughts I have is that when we
18 think of putting a degreed man in the control room in all
19 shifts, I think one of the things you also have to think about
20 is what intellectual pursuit do you give that guy in order
21 to keep him engaged and happy and make his position meaning-
22 ful. I think this business of the operations analysis, the
23 pursuit of the understanding and the operational events that
24 you observe is one of the kinds of things that that guy
25 could do that would be synergistic with this task of

1 understanding the safety and being there as a resource person
2 in case of an emergency.

3 I think one needs some kind of a structure where
4 each company does a good job of analyzing its own experiences
5 and then somehow comes together on an owner's group basis
6 or something to get the crossfeed from the other companies
7 and to do that on a fairly frequent basis. I think in that
8 deposition, I suggested monthly.

9 I also suggested that I think there would probably
10 be merit then in someone like the NRC doing this essentially
11 in parallel so that we perhaps have the benefit of a degree
12 of redundant look at those issues.

13 I think the problem here, when you try to trace
14 back specifically through Davis-Besse, is that that event
15 was just snow into a mountain of other analogous paper. The
16 only report with significant details in terms of the event,
17 is the one that came through a private reporting service,
18 but even that report provided no evidence of the significance
19 of the observations, no derivation of the meaning. It was
20 all just very matter of factly reported as A did this, B did
21 this, C did something else; no derivation or meaning. As
22 far as I can tell, Toledo didn't pick it up, B&W didn't pick
23 it up, the NRC didn't pick it up, we didn't pick it up, the
24 significance of that event.

25 When you look at the forms of the official reporting

1 channels, those were all so sketchy as to -- well, a guy
2 would really have to be looking -- like walking across the
3 United States and stop off in Kansas and reach down and pick
4 up a nugget of gold. It is just a needle in a haystack.

5 You do have the problem of looking beyond these
6 events, not just accepting these events as the ordinary
7 behavior of components, but rather analyzing those events
8 for their meaning in terms of the system and safety assump-
9 tions, the operator training procedures and the like.

10 The very, very fundamental thing in the Davis-
11 Besse matter is that that signal that there had not been a
12 proper anticipation of system behavior in response to a leak
13 from the pressurizer and that then significantly undercut
14 the validity of the prior procedural reviews and training
15 and the like. That wasn't detected. Here with one kind of
16 a leak, the system behaves fundamentally different than it
17 does for most other leaks. One has to recognize that and
18 make sure that the procedures and the training are recognized
19 and that was missed.

20 I do believe that one of the most important things
21 that ought to be learned out of this is to treat these plants
22 as maturing technology, which means you learn from the
23 experience with them as you go.

24 Q On Wednesday, March 28th, it appears that there
25 was quite a bit of advantage in being away from the control

1 room in terms of the ability of people to diagnose what was
2 happening even though they had alot less information.

3 There were quite a few people with experience,
4 competent people, who got themselves pretty well organized
5 in the control room and had alot of information available to
6 them but they were having really a terrible time, it appears,
7 throughout the day really doping out what the situation was.

8 At the same time, people with much less informa-
9 tion in places like Parsippany and Lynchburg, Virginia
10 seemed to be able to take some of that information and
11 diagnose what was happening by mid-afternoon and wanted to
12 get back to the control room with input.

13 I think you have discussed in prior testimony
14 the desirability of having an experienced engineer in the
15 control room knowing something perhaps a little more than
16 an operator or even a shift supervisor about the way in
17 which the system may be working or not working as expected.

18 Q. It has also been suggested that it might be
19 advisable to have some kind of a national centralized command
20 center where basic plant perimeter data can be telemetered
21 through the same channels that are set up for a reactormeter
22 and where you have, instead of having hotlines to the NRC,
23 you have a hotline from the control room to this place so
24 that instead of speaking with people with engineering degrees
25 in every one of 160 control rooms, you have people at the

1 central location who can do this kind of a diagnosis. Do
2 you have any reactions to that latter suggestion?

3 A. I don't think the perimeter of importance is
4 proximity. I think the perimeter of importance is breath
5 of knowledge about the basic phenomenon involved in training.

6 Again, I think the problem of the limitation of
7 the fellows in the control room was that their experience
8 and their training was heavily concentrated under the
9 presumption of operations in the normal regime and that they
10 were not knowledgeable enough about all of the transfer fluid
11 flow, safety phenomenon that manifest themselves when you
12 get into the way the hell off normal regime as we did.

13 I think, again, the advantage of the guys at a
14 distance was not their distance, but rather their depth of
15 knowledge in their training. If you say then that there is
16 such a limitation of people with such knowledge, maybe then
17 in order to get broad coverage, one needs to centralize them.

18 I am not sure that is necessarily true, because in
19 turn you still have got a problem of a backlength in terms
20 of how does that knowledge on the part of those separated
21 observers get back to the control room and get translated
22 into actions and decisions and the like.

23 I would definitely be against any concept of
24 remote control. I just can't conceive that that could ever
25 work. I guess I think of the guy in Bethesda who doped it

1 out towards the end of the day, Vic Stello. Well, I think
2 Vic is an unusual guy in terms of his breadths and depths of
3 knowledge. I don't happen to know who may have known how
4 much at B&W and Lynchburg or even Parsippany. I think our
5 guys in Parsippany were restricted by the amount of informa-
6 tion available to them. Their ability to contribute would
7 have been enhanced had they had more information directly
8 available to them without the impedances of a communication
9 lack.

10 I tend to think the dominant line of defense
11 needs to be in the plant. I think there has got to be a
12 tight loop there for observation, deduction, conclusion,
13 action.

14 I don't have alot of confidence in the remote
15 control concepts. Perhaps when I say remote control I am
16 purposely using demeaning adjectives, but I don't have alot
17 of confidence in the real ethicacy of that. Maybe it can
18 work. I think it is different than the Savannah River, which
19 is a remote emergency control, but that has kind of, as I
20 understand it, one purpose. That is where the ultimate guy
21 mashes the button that gives the ultimate shutdown. That is
22 a very narrow kind of a thing. Here we are talking about
23 all of the analysis, all of the understanding, and all of
24 the decisions to begin to operate and maneuver the plant in
25 the event that it is gotten far outside its normal regime.

1 It is one thing to control the plant if it is still solid
2 water with pumps running. It is another thing when all of
3 a sudden you have no pumps, no natural circulation, a large
4 amount of non-condensable gas, et cetera.

5 I personally tend to think that there is not going
6 to be an easy substitute for solid competence on the plant's
7 site. That doesn't mean that remote observers and remote
8 diagnosticians can not be useful, I don't mean to say that.
9 I don't think that is the route to a permanent fix, but that
10 is a personal judgment.

11 MR. FRAMPTON: I think it is a couple of minutes
12 before 12:30. We promised to finish by then, so we will.

13 Thank you very much for your time, your cooperation.
14 This has been very helpful for me and we appreciate it.

15 THE WITNESS: We hope so, and we hope it has been
16 useful to you and we hope the final report will be useful.
17 I think our feeling has been that we have a special obligation
18 to be as open and cooperative as we know how on all these
19 investigations because we think it is critically important
20 that a full range of the facts come out in our report, in
21 laymen's language.

22 MR. LIBERMAN: Mr. Dieckamp earlier referred to
23 the level of power operation of TMI-2 during the power
24 essention program at various levels. I would simply like to
25 call to your attention, because of the flood of papers you

1 perceive, that on August 23rd I sent Mr. Vandenberg a copy of
2 a letter and some enclosures that I had sent Mr. Whitman in
3 a letter of August 20th that included a graphic form and also
4 in a very short summary a level of energy generation and I
5 think it may be a useful document to refer to.

6 The question I have is that in the deposition of
7 Mr. Toole, he had a very large diagrammatic presentation of
8 sequence of the test program. I don't know if Mr. Evans
9 and Mr. Vandenberg are aware of this form, but it may be
10 of some useful purposes for you. If you don't have it I would
11 like to renew the offer to get it to you in some form that
12 would be useful to you because I think it tends to present
13 as well as I think we can what the program was in graphical
14 form.

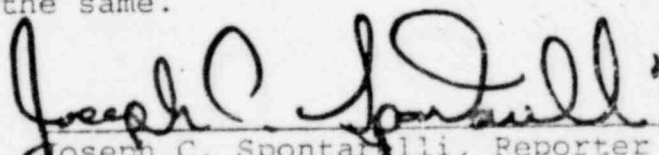
15 MR. FRAMPTON: I think we would like to have that.

16 Thank you very much.

17 (Whereupon, the deposition was concluded at
18 12:30 p.m.)

19 CERTIFICATE

20 I hereby certify that the proceedings and evidence
21 are contained fully and accurately in the notes taken by me
22 on the hearing of the foregoing cause, and that this copy is
23 a correct transcript of the same.

24 
25 Joseph C. Spontarilli, Reporter
Notary Public in and for the
Commonwealth of Pennsylvania

MONICK STENOGRAPHIC SERVICE

My commission expires
July 20, 1981