

NUCLEAR REGULATORY COMMISSION

COMMISSION MEETING

RETURN TO SECRETARIAT RECORDS

In the Matter of: PUBLIC MEETING

CONTINUATION OF ORAL PRESENTATIONS
TMI-1 RESTART

P.M. Session

DATE: October 14, 1981 PAGES: 1 thru 156

AT: Washington, D. C.

RETURN TO SECRETARIAT RECORDS

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400 Virginia Ave., S.W. Washington, D. C. 20024

Telephone: (202) 554-2345

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
CONTINUATION OF ORAL PRESENTATIONS

TMI-1 RESTART
PUBLIC MEETING

Nuclear Regulatory Commission
Room 1130
1717 H Street, N.W.
Washington, D.C.

Wednesday, October 14, 1981

The Commission met, pursuant to notice, at 2:00 p.m.

BEFORE:

- NUNZIO PALLADINO, Chairman of the Commission
- PETER BRADFORD, Commissioner
- JOHN AHEARNE, Commissioner
- THOMAS ROBERTS, Commissioner
- VICTOR GILLINSKY, Commissioner

ALSO PRESENT:

- R. DEYOUNG
- D. HAVERKAMP
- T. NOVAK
- S. HANAUER
- R. SILVER

- E. BLAKE
- W. G. KUHNS
- H. DIECKAMP
- R. ARNOLD
- P. CLARK
- H. HUKILL
- W. L. GIFFORD
- J. HERBEIN
- R. W. KEATEN
- R. L. LONG
- R. WILSON
- J. DOROSHOW
- L. BRADFORD
- M. AAMODT

J. CLEWETT

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DISCLAIMER

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1 personally believe that is true. I was gratified to see
2 that NUREG 760, after extensive further investigation,
3 reached exactly the same conclusion with respect to the tag
4 end of that same sentence that says that no one with health
5 information -- that is in the context of the statement about
6 the meaning of the hydrogen spike on the day of the accident.

7 And while it may not be too meaningful today to
8 redefine what words mean, to me "withholding" is an adjunct
9 term.

10 COMMISSIONER BRADFORD: Let me resharpen my
11 question. I don't mean to re-examine the whole point about
12 the mailgram again. It was that one point that did surprise
13 me. I remember that the mailgram said that there was some
14 evidence that anyone had interpreted the pressure spike to
15 be related to hydrogen.

16 Later two of our employees came forward and said
17 that they had so interpreted that, and I gather later still
18 there was some fuzziness about the extent to which one of
19 them still adhered to that position.

20 But what I wanted to focus on now was whether you
21 still thought it was true that there was no evidence that
22 any other employees so interpreted it.

23 MR. DIECKAMP: Again I subscribe to the NUREG 760
24 that said very explicitly that they conclude that no one
25 understood the meaning of the pressure spike on the day of

1 the accident, and I share that view. I had that view on May
2 9.

3 COMMISSIONER BRADFORD: Would you still say that
4 as of today, there was no evidence to the contrary given
5 that two of your employees testified to the contrary?

6 MR. DIECKAMP: Again, I think no in terms of zero
7 is an extremely difficult concept for any of us to subscribe
8 to at any time, but on May 9 I certainly wasn't aware of any
9 evidence. On May 9 I was unaware that anybody had said
10 anything about that.

11 To my knowledge, there still is no evidence that
12 anyone spoke to the effect that he interpreted the pressure
13 spike on May 9 as being hydrogen burn.

14 I think one also has to keep in mind that the
15 so-called evidence comes long after the time when the
16 interpretation was clear and known to everyone, and I think
17 also one of the things that we have observed throughout this
18 period of the accident starting even just a few days after
19 the accident, almost everyone had an almost impossible task
20 of trying to keep facts straight, separate the facts from
21 what he knew then versus what he subsequent came to know,
22 and also maintain a proper time relationship on not only
23 things he did, but the things he knows or thought he knew.

24 So again, I personally am not uncomfortable about
25 that statement.

1 COMMISSIONER BRADFORD: I don't disagree with your
2 overall observation about people's ability to remember those
3 events, but I was surprised, and here you maintain that even
4 now there is nothing in the mailgram that you consider
5 inaccurate just because it did. It seems that the testimony
6 of those two employees, whatever weight one gave to it at
7 least was evidence to the contrary.

8 MR. DIECKAMP: I will accept that those statements
9 may constitute evidence, although not necessarily or I will
10 not accept that they prove anyone did interpret improperly
11 on the date of the accident. It depends on what the
12 definition of evidence is.

13 I think the real issue is: Did anyone know on
14 that day? I still believe no one knew what was the meaning
15 of the pressure spike.

16 COMMISSIONER BRADFORD: May I ask you about one
17 other thing you said this morning? I mention it only
18 because it was contrary to what I understood the situation
19 to have been. I don't think it necessarily weighs in this
20 proceeding.

21 You said that the thermocouples were not connected
22 to anything that read out, and that people had to go behind
23 or downstairs or wherever to take the measure. I always
24 understood that they did read out. The problem was that the
25 readout stopped at 700 degrees.

1 MR. DIECKAMP: Not for these thermocouples. The
2 stopping at 700 degrees is correct for thermocouples on
3 outlet piping that read water temperature. I am of the
4 belief that these thermocouples were stubbed down and were
5 not connected to any instrument.

6 I would ask my colleagues if any of them could
7 tell me whether I am wrong on that.

8 Bob?

9 MR. HUKILL: I think probably, Commissioner, that
10 the computer did have available up to 700 degrees, the end
11 core thermocouples, but there was no direct readout of them
12 available. To take those measurements one had to go to the
13 terminal box.

14 Let me just check with Mr. Keaton.

15 COMMISSIONER GILINSKY: Was there no meter at
16 all? Usually there is.

17 MR. HUKILL: No, usually there is no meter hooked
18 up to this, and to get above the raise for which the
19 computer was programmed to read them, one had to go down
20 into the cable spreading room as described by Mr. Dieckamp
21 to make the terminal connections with the test device
22 portable instruments.

23 COMMISSIONER BRADFORD: But people in the control
24 room didn't know the computer itself was printing question
25 marks?

1 MR. HUKILL: There were people in the control room
2 that knew that, yes. I am not sure that the people who knew
3 that understood that question marks would be the result of
4 being above scale, as opposed to it being an invalid reading
5 as the software would check it.

6 COMMISSIONER BRADFORD: I have always understood
7 there was an ambiguity there, but I hadn't previously heard
8 there were people in the control room who had no indication
9 at all available to them. I just wanted to clear that up.

10 With regard to the question I asked earlier this
11 morning about financial impacts on safety decision-making, I
12 understand the situation as you describe it to me now, both
13 Mr. Dieckamp and Mr. Arnold.

14 Is that the situation as you understood it existed
15 for the TMI accident, the relationship between the
16 dispatcher and the plant operators, or has that in some way
17 been changed since the accident?

18 MR. HUKILL: There has been no change in the
19 authority or responsibilities of the plant staff or their
20 relationship with the system dispatchers that I am aware of,
21 and certainly on the aspects of it we discussed this
22 morning, those were the policies and responsibilities.

23 COMMISSIONER BRADFORD: I will tell you why I
24 asked. I don't think there has ever been a finding or an
25 inclusion on this point, but at least one of your employees

1 in testimony with the Senate investigating committee
2 indicated that the dispatcher had been requested to give
3 permission to take the unit down specifically because of, I
4 think, the concern over the high readings from the tailpipe
5 behind the PORV, and to look into that situation, and that
6 that request for permission had been rejected.

7 Is that in your view not a critical possibility?

8 MR. HUKILL: Frankly I can't relate to that
9 description of it. I am not familiar with other specific
10 testimony, but maybe you could refer to it, Phil.

11 MR. CLARK: I think it would be credible in this
12 sense: If the plant calls the dispatcher and says, "I have
13 something I have to fix the next week or so. I would like
14 to come down tonight," the dispatcher might say, "Wait 'til
15 Friday."

16 So in that sense, the permission was denied. If
17 the plant says, "I'm coming off the lines," that is it.
18 There is no information required.

19 MR. DIECKAMP: I have never heard any comment that
20 a specific case continued to operate in the presence of that
21 leakage was influenced by dispatch considerations.

22 COMMISSIONER BRADFORD: In that context, there is
23 a Board discussion of the new maintenance system and
24 especially maintenance priority. That appears on page 166
25 of the Board Order.

1 I notice among them priority one items. There is
2 generally obviously a concern for safety. No mention though
3 is made of a condition or a relation of the license
4 technical specifications as being actually anywhere in the
5 priority hierarchy.

6 Where would that fit? If you had a situation that
7 was in violation of the tech specs but did not seem in the
8 plant management's mind to raise a safety concern, would
9 that still be a priority one?

10 MR. ARNOLD: Let me suggest Mr. Hukill address
11 that.

12 MR. HUKILL: I haven't seen the question, but
13 certainly in my mind that would be a priority one, and I
14 will take what you have got and go back and make sure it is
15 because I think it should be a priority one.

16 MR. ARNOLD: When we have a violation of the tech
17 spec or the condition outside of the tech spec requirements
18 that go through, I think, a different evaluation process,
19 that is really the way to address that. It may well result
20 in a maintenance work request being generated, in which case
21 I would expect it to be priority one if it related to the
22 safety and continuing of operations, when in general the
23 tech specs provide the envelope under which operation is
24 acceptable, not how soon does one have to maintain something
25 if we exclude the surveillance testing which obviously is a

1 maintenance type activity.

2 MR. DIECKAMP: Wouldn't it be fair to say that the
3 violation of tech spec is something that is outside the
4 realm of discretion, with perhaps the exception of those
5 situations where you had 24 or 72 hours to correct, but then
6 once that time is gone, there is no longer a question of
7 just prioritizing: It is an absolute requirement to respond.

8 MR. ARNOLD: That is right. I guess I don't quite
9 understand the context in which it was said, but I agree
10 with you.

11 MR. CLARK: In priority one the Commissioner talks
12 about, it is a time clock of very short duration, and that
13 terminology basically comes from the tech specs which say
14 that if a piece of equipment is out of service, you have to
15 have it back in 8, 12, 24 hours or shut down. And that is
16 referred to typically as the time clock.

17 The elevation of the tech spec must shut down or
18 you have a period of time, a time clock in which to repair
19 it, and that falls under priority one.

20 MR. ARNOLD: That is not a case of being in
21 violation at the time. It would have been a violation if
22 the repair situation weren't corrected and didn't shut down.

23 COMMISSIONER BRADFORD: That is basically the
24 situation Mr. Dieckamp was describing earlier today.

25 MR. ARNOLD: Yes.

1 COMMISSIONER BRADFORD: Well, again with regard --
2 let's take a situation that we know did occur, rather than a
3 hypothetical. What is it about your revised management
4 procedures that would lead to a different outcome if you had
5 the same situation today that I gather existed in the days
6 preceding March 28, '79 with regard to the high temperature
7 readings and excessive leakage from the PORV?

8 MR. ARNOLD: Let me again suggest that Mr. Hukill
9 address that. I think it falls into the areas of procedures
10 and the personnel training and availability of a
11 shift-to-shift basis for people who would pick up and act on
12 that kind of a situation.

13 MR. HUKILL: I can answer it by saying that number
14 one, the procedures in question -- our emergency and
15 casualty procedures have been reviewed in extreme detail.
16 These kinds of things you just mentioned were brought out
17 and the operator understands and is given written
18 instructions on what he is to do if there is any violation
19 or if there is any indication of a problem that is not in
20 accordance with the tech specs or the procedures.

21 COMMISSIONER BRADFORD: Were the operators really
22 in any doubt about that before?

23 MR. HUKILL: I can't answer that. I wasn't there.

24 MR. ARNOLD: I would say there is no question
25 there was doubt, if by that you are referring to the

1 temperature being above 90 degrees. That was one of the
2 symptoms of a leaking PORV, and that was just one of several
3 symptoms.

4 I think the way the procedures --

5 COMMISSIONER BRADFORD: Maybe I didn't make my
6 question clear. I'm not talking about during the accident
7 so much as the allowing of that condition to continue in the
8 days before the accident.

9 MR. ARNOLD: And if one looks at the condition
10 before the accident, I don't think you would find, in our
11 opinion, although there was a difference between our
12 judgment and the I&E office on this, that we were violating
13 a procedure or the tech specs with regard to continuing to
14 operate.

15 I would clarify that by saying that subsequent to
16 the accident, a calculational error was discovered in the
17 leak rate calculation which showed in retrospect that we
18 were above the one gallon per minute tech spec limit for
19 unidentified leakage.

20 That was in violation of tech specs.

21 COMMISSIONER BRADFORD: But your point is that
22 that was known before the accident.

23 MR. ARNOLD: Right. In fact it was being reviewed
24 periodically, and it was being verified, but as they
25 understood it they were staying within the one gallon per

1 minute.

2 MR. DIECKAMP: Isn't it an important feature there
3 that people made the judgment that the controlling limit was
4 the leak rate, when in reality one of the significant
5 factors was the desensitizing of an instrument that could
6 have been a stronger indicator of continued leakage?

7 It is that piece that was not incorporated in the
8 procedures at the time, and I think again that is one of the
9 areas of lessons learned that one needs that more broadly
10 these indicators as to what they mean.

11 MR. HUKILL: I think I should clarify it a little
12 bit, too. In the talks I told you I had with the operators,
13 the licensed operators in the last month or two, this very
14 specific question was asked. I then brought it up with each
15 licensed operator as to what action I would take, and they
16 asked me what action I would take if this type of event
17 happened and if we knew that the PORV was leaking.

18 My answer to them was that number one, if it is a
19 violation of the technical specifications, there was
20 absolutely no question that we would shut down the plant.

21 COMMISSIONER GILINSKY: We understand that. They
22 are asking you what you would do if the leakage exceeded the
23 technical specifications?

24 MR. HUKILL: I had one operator ask me that, yes,
25 sir. There is no question in my mind what I would do. I

1 would immediately order the plant shutdown.

2 In fact, if you read the Conduct of Operations
3 procedure that we have written, it is issued to the people
4 that every operator in the plant from the CRO to the shift
5 foreman to the shift supervisor to the manager of operations
6 up through me has the authority to shut down that plant, and
7 at any time that he feels that such direction is in the
8 right direction for safety.

9 This is one of the key issues that I have
10 discussed in two-hour periods with each of my operators. I
11 have tried to cover it in the procedures, and you can cover
12 specifics in the procedures, but you can't cover -- I don't
13 think you can really hit the general attitude. You have got
14 to sit down with operators and go over the general attitude
15 of how do you feel about this kind of thing?

16 I can be very clear with you how I feel. That was
17 the school I was brought up in.

18 COMMISSIONER GILINSKY: Let me understand what you
19 say. Can that order be countermanded by the man above him?

20 MR. HUKILL: No, sir, it cannot. The man at the
21 controls, if he can shut down that plant, he is going to
22 shut it down.

23 COMMISSIONER AHEARNE: You say that the authority
24 to shut down the plant, it goes down slowly from the
25 operator out of the crew?

1 MR. HUKILL: He has the authority signed by me to
2 shut down the plant. That is the way I have lived all of my
3 life in the nuclear power business, and I intend to continue.

4 CHAIRMAN PALLADINO: Do you have more questions?

5 COMMISSIONER BRADFORD: Yes, I do. Mr. Hukill,
6 while I have you, you indicated earlier that you ran for six
7 shifts. Do you have the necessary number of shift
8 supervisors or supervisor candidates at the moment?

9 MR. HUKILL: No, sir, we do not. Right now we are
10 planning to probably be on a one and five when we start up.
11 We have promoted to the point where we have, I believe, it
12 is six shift supervisors and four shift foremen. I won't
13 swear to those numbers, but as close to those numbers,
14 because of the loss of two shift supervisors, as you are
15 well aware, due to the exam problem.

16 At the time of the exam I did have six and six,
17 six shift supervisors and foreman. I promoted two shift
18 supervisors to shift foreman, and am now short on the shift
19 foreman ranks which I need to develop. That should be
20 foremen promoted to supervisor.

21 COMMISSIONER GILINSKY: Your earlier point: If a
22 single control room operator thinks the plant should be shut
23 down and the shift supervisor doesn't think so, would there
24 still be a shutdown?

25 MR. HUKILL: May I answer that, or are you asking

1 someone else?

2 COMMISSIONER GILINSKY: No, I am asking you. I am
3 trying to understand.

4 MR. HUKILL: Yes, sir. I will answer that. I
5 have been very specific with them. They have the written
6 authority signed by me as the Director of Unit 1 to shut
7 down the plant any time we are in violation of the technical
8 specifications or at any time in their minds. Where they go
9 to the safety of the plant, the plant should shut down.

10 I have made this specific to each operator as I
11 have talked to him, and made it specific to him that this is
12 his responsibility as a licensed operator of the plant. The
13 NRC issues the license. We give him and appoint him to the
14 job as control room operator, and I feel very strongly that
15 he has that authority and he has it in writing.

16 COMMISSIONER BRADFORD: How long will it take you
17 to have the additional shift foreman, assuming things go
18 well?

19 MR. HUKILL: I find that question very hard to
20 answer. I don't really know. It depends on what my senior
21 people feel of the CRO's that are available to promote and
22 whether they feel they have the technical qualifications and
23 whether they have completed the training for SRO
24 qualifications which they will have to go up for.

25 I just don't know. I would hope within the next

1 two or three months.

2 MR. ARNOLD: I think there was one
3 misunderstanding. I understood your question to be whether
4 we would have sufficient numbers either licensed or in
5 training to man five shifts.

6 COMMISSIONER BRADFORD: Yes.

7 MR. HUKILL: You said six shifts.

8 COMMISSIONER BRADFORD: I started with six, and
9 then I guess I blurted a little bit. The answer was yes to
10 five but not to six?

11 MR. HUKILL: Yes. We will be very close to five
12 shifts. My aim is five shifts to start with. Six is going
13 to be practically impossible to make at this time.

14 COMMISSIONER BRADFORD: What have you done
15 differently with regard to alarms in the event of something
16 of the magnitude of TMI? Would the alarm situation be as
17 chaotic in the early stages if that happened again?

18 MR. ARNOLD: Let me ask Mr. Keaten again to
19 address that. He has been heavily involved in the
20 modification of the alarm system.

21 MR. KEATEN: I think there are a couple of answers
22 to that, Mr. Bradford. In the first place, TMI-1 does not
23 have nearly as many total alarms in the sense of enunciator
24 panels as TMI-2 has, and so the situation just because of
25 the basic design of the plants is better in Unit 1 than it

1 was in Unit 2.

2 The second thing that we have done is that we have
3 taken the alarms that we considered to be really critical --
4 and there are about 16 of these -- and we have given them
5 red windows on the enunciator, so that those are immediately
6 brought to the operator's attention as something that he
7 should pay special attention to and take special action.

8 That is not something that we have in the case of
9 the Unit 2 accident.

10 Then we have gone to other color schemes to
11 indicate other alarms that are more important than the
12 background alarms, which are not quite as important as the
13 red-coded one. So there is a color-coded prioritization
14 system that will be available at the time of restart that
15 was not there during the accident.

16 You will still get, in the event of a reactor
17 trip, something like that, you will get a large number of
18 alarms. What we have done in a sense is establishing a
19 priority along with the other steps that I mentioned this
20 morning, in terms of giving him special displays of the
21 parameters that we consider to be really critical we think
22 will help him to focus his attention on the things that we
23 think he needs to be looking at.

24 In addition to that, we have put into effect -- we
25 have a plant process computer, a graphic display which is

1 called up automatically any time the reactor trips, which is
2 a moving plot of the reactor pressure versus the temperature
3 in the reactor.

4 This plot, we have found out in conjunction
5 working with the B&W owners group and others, this plot
6 gives a very good representation of the ability of the
7 systems to lose heat, and we have carried out training of
8 the operators in how to interpret the trends that appear on
9 this.

10 So this again is a matter of trying to focus his
11 attention on these particular parameters that he needs to be
12 worrying about at that time, rather than being submerged in
13 all the other things that might be happening.

14 COMMISSIONER BRADFORD: In the same vein, who will
15 be handling the questions that tend to pour in from the
16 outside world in a chain of events like that, Mr. Hukill?

17 MR. HUKILL: Could you repeat your question,
18 please?

19 COMMISSIONER BRADFORD: Another of the problems in
20 apparently the early stages of an event like TMI is that
21 there are terrific demands placed on the people who are
22 trying to analyze and cope with that in terms of informing
23 the outside world. How will those demands be coped with,
24 and how are the people who are in effect manning the
25 telephones be at the same time keeping themselves informed

1 of the status of the plant?

2 MR. HUKILL: What we really have on-line now is
3 that the shift foreman will be in direct control of the
4 plant and of the control room operators. The people who are
5 manning the phones or people from our maintenance -- as I
6 told you earlier, we have shift maintenance people. They
7 are trained to man the phones and make the reports.

8 They are the people who will come up and make the
9 reports. As far as determining the trends and determining
10 what should be made in the report, it is the emergency
11 director, who is the shift supervisor, and his duties now
12 have been greatly and significantly reduced so that he is in
13 really overall charge and standing back and watching the
14 whole picture, and he is not off running down some component
15 or something like that. He is the man until the duty
16 emergency shift supervisor or the offsite people arrive. He
17 is the one in charge, and he is responsible for making the
18 determination of what is reported on the telephone and what
19 is given to the outside agencies.

20 The people on the telephones who are actually
21 making the majority of the reports are people from the
22 maintenance department who are trained in that capacity, to
23 come up and man the telephones.

24 MR. ARNOLD: In addition to that, Commissioner
25 Bradford, perhaps I could ask Mr. Gifford, who is head of

1 our Communications Division, to address the communications
2 in the event of a plant upset, who go to the public media
3 and some of the government officials that are not involved
4 in getting technical reports.

5 MR. HUKILL: I might also mention that the STA is
6 available directly to the shift supervisor to provide him
7 guidance from a technical aspect of what he should be doing,
8 and what is the real problem, and what kind of information
9 he should be putting out.

10 MR. ARNOLD: Well, he works in basically three
11 stages. As the situation requires, the escalation or the
12 augmentation of the on-shift people, people who communicate
13 with the media, Mr. Gifford will address -- are included in
14 the first wave, as it were, of augmentation of on-shift
15 people.

16 MR. GIFFORD: Commissioner, in the event of an
17 emergency, we would have from the Communications Division,
18 personnel present in the emergency offsite facility with
19 access to the emergency director. He in turn would be
20 communicating with his colleagues in the Communications
21 Division to a communications center which would be equipped
22 with telephones to which the public has access through the
23 information numbers listed for Three Mile Island.

24 In addition to that, there would be activated at
25 our immediate center, which would be the point that the

1 media would be asked to assemble, and they in turn would be
2 receiving direct communication from the emergency offsite
3 facility in order to brief the press on the events that
4 transpired.

5 COMMISSIONER BRADFORD: Have you planned for the
6 situation where your phones will be jammed with people
7 trying to call in?

8 MR. GIFFORD: We have addressed that, Mr.
9 Bradford, in a number of ways, by trying to provide hookup
10 phones which will provide rollover where the phones would
11 roll over to other numbers. You reach a point where you
12 have to decide how many of those calls, and we are about at
13 the stage now where we would have 20 lines available.

14 But the limitation is clearly because of the need
15 for personnel.

16 CHAIRMAN PALLADINO: Do you have any phones that
17 you would limit to outcalls?

18 MR. GIFFORD: Yes, sir, that is correct.

19 CHAIRMAN PALLADINO: Do you have any more?

20 COMMISSIONER BRADFORD: One more. With regard --
21 let me see if I understand the part about how the revised
22 corporate structure works in terms of giving us technical
23 capability. I want to know about your relationship with
24 B&W. Have they themselves revised their procedures and
25 structures in such a way that you have adequate assurance

1 that something on the order of the Davis-Bessie series of
2 events would be brought to their attention in the future?

3 MR. ARNOLD: Commissioner, I am not sure that I
4 could state categorically that the B&W procedures
5 specifically would ensure that we will have received a B&W
6 analysis on that, and we have frankly looked to the NSAC
7 input efforts on evaluation of other plant events to be our
8 major source of decal information on those items.

9 We do, however, have a very close technical
10 interplay with B&W.

11 COMMISSIONER BRADFORD: How quickly do NSAC and
12 N-PO respond to the events of the Davis-Bessie order of
13 magnitude? How quickly would you hear about that?

14 MR. ARNOLD: Let me ask Mr. Keaten and Mr. Herbein
15 to comment on that.

16 MR. WILSON: I think I can comment on two ways on
17 that. B&W --

18 CHAIRMAN PALLADINO: Would you identify yourself?

19 MR. WILSON: I am Mr. Wilson, Technical Director
20 of GPM of the B&W Owners Group, which is a collection of the
21 owners of the 177 B&W plants. They have an agreement with
22 B&W wherein the event, the unanticipated transient or the
23 unanticipated reactor trip, that B&W personnel will go on
24 the site within 24 hours and perform perfunctory or initial
25 review of that.

1 That initial review is made available back to the
2 B&W corporate offices through computer systems made
3 available to other B&W owners, so that happens directly
4 within the B&W plant structure.

5 The other thing I think Mr. Arnold was referring
6 to was through the N-PO organization, we are tied together
7 with a computer system. We feed automatically information
8 into that computer system which is available to then other
9 plants within the country.

10 There is a program referred to as NOTEPAD in which
11 the event and subsequent information on the event is entered
12 into a commonly accessed computer memory.

13 MR. CLARK: That is fairly real time. Of the
14 major incidence I know I recall over the past year, I know I
15 have seen the initial printout from NOTEPAD within the first
16 day or two.

17 MR. WILSON: Yes, it generally happens within 24
18 hours.

19 MR. CLARK: Then it is updated as more is known.

20 COMMISSIONER BRADFORD: But that is a little
21 different from the kind of input that would have helped you
22 if you had had it from the Davis-Bessie analyses. That is
23 the kind of analytical work that would have suggested to you
24 that the operator could be misled by the behavior of the
25 pressurizer, but you will get that out of NOTEPAD in all

1 probability.

2 MR. CLARK: You do get that out of N-PO. The N-PO
3 takes all the events, and there was a transition from NSAC
4 to N-PO, and I may be a little bit ahead of myself, but one
5 of the other has and will continue to screen all of the
6 events to determine which is significant, arrange analysis
7 of it to determine implications and provide that to all of
8 the N-PO members.

9 Over and above that we have our own group that is
10 referred to in our operation as advice program, which
11 monitors which comes out of N-PO and NSAC and does its own
12 evaluation as to whether there were some we want to pursue
13 further in terms of implication; then assigns the people to
14 go modify the procedure, change the training or whatever.

15 COMMISSIONER BRADFORD: How big is N-PO now?

16 MR. CLARK: I have guessed 230 people or something
17 like that. I was just looking at it the other day.

18 MR. ARNOLD: I think, though, in terms of the type
19 of analysis you are requesting in the Davis-Bessie type
20 situation, Mr. Wilson's description of what is being done
21 through the owners group is probably the way in which we
22 would expect the earliest on analysis of those events.

23 That is one of the reasons we have them here. It
24 slipped my memory that we did have that mechanism in place,
25 which I am familiar with.

1 COMMISSIONER AHEARNE: Could you talk a minute
2 about what would happen in your organization if that kind of
3 information came in?

4 MR. WILSON: We generally interrogate the NOTEPAD
5 system every day. So as information comes in, then we
6 directly -- if what is on the computer system is not clear
7 or whatever, we do get in touch with the B&W response center
8 in Lynchburg, who is in contact with wherever the event
9 might be going on, and follow the event through them.

10 We then, depending on what it is, either
11 independently try to assess from the facts that are there
12 and glean some further understanding of it in real time, or
13 whatever the case might be. It depends on a case by case
14 basis.

15 COMMISSIONER AHEARNE: You don't then as a matter
16 of practice do your own analysis? You might take analysis
17 that is devised by B&W.

18 MR. WILSON: On our own plants by procedures, we
19 would do the analysis on all unusual or other kinds of
20 reactor trips. We had systems that also screw up in place
21 and do perform that analysis.

22 COMMISSIONER AHEARNE: No. I am speaking of a
23 particular -- for example, Davis-Bessie type situation.
24 That information if it came in to you through NOTEPAD or
25 through the B&W 24-hour alert, would you then do your own

1 analysis of that and the significance for your plant, or
2 would you wait for the analysis to be developed by N-PO or
3 B&W?

4 MR. WILSON: I think it would depend on what it is
5 and what our perception of what was going on and how fast
6 and responsive other people were taking a look at the
7 information. I think it would be a case by case basis.

8 MR. ARNOLD: I would not expect to attempt to do a
9 Davis-Bessie type plant experience analysis, for
10 Davis-Bessie, in effect a check on how their analysis was.

11 COMMISSIONER AHEARNE: I'm trying to determine how
12 you would then -- you get the information coming in.

13 MR. ARNOLD: Yes.

14 COMMISSIONER AHEARNE: There has to be some kind
15 of a step that takes that information, evaluates the
16 significance.

17 MR. ARNOLD: To us, yes.

18 COMMISSIONER AHEARNE: Then following that step,
19 if you judge it to be significant, translate that into some
20 type of information which is given to the operator.

21 MR. ARNOLD: Yes, and the responsibility for
22 taking those occurrences and analyzing the significance of
23 them to us resides in Mr. Wilson's decision that they are
24 responsible for identifying hardware implications, training
25 implications, procedure implications, and then they would

1 task out to the part of the organization that would have to
2 put in place the particular changes; if it is procedures or
3 training, then track the accomplishment of the followup
4 action that would identify it.

5 MR. CLARK: I think if they saw an immediate
6 lesson, they would screen it. If they saw an immediate
7 lesson, they would issue that for action. If they felt it
8 would require more analysis, understanding, et cetera, they
9 would determine were N-PO and NSAC doing it. They would
10 then decide whether we need to do more ourselves or wait the
11 outcome of the industry effort.

12 It is not really practical for each facility to
13 independently analyze each one, so we go through that kind
14 of process.

15 COMMISSIONER AHEARNE: What I was trying to get
16 at, I was trying to understand: Is there an automatic
17 standard operating procedure in place that when that kind of
18 information comes in, there is at least that initial review
19 done to determine if it's something that you need to take
20 immediate notice of.

21 MR. WILSON: There is an issue with you about the
22 systems analysis group who venture a judgment. I have to
23 say that that initial information that might come in might
24 not be complete or whatever. It is what is available at the
25 time and judging that.

1 COMMISSIONER AHEARNE: But you do rely on initial
2 screening by your own people, as opposed to the outside?

3 MR. WILSON: That is correct.

4 CHAIRMAN PALLADINO: Thank you very much,
5 gentlemen.

6 COMMISSIONER GILINSKY: I have several other
7 questions.

8 CHAIRMAN PALLADINO: I thought you were through.

9 COMMISSIONER GILINSKY: Well, I do have a few.

10 CHAIRMAN PALLADINO: I want to allow time for
11 other people. Are these questions that --

12 COMMISSIONER GILINSKY: However you want to do
13 it. If you would like to take the others first -- I assume
14 everybody is going to stay, or we can do them now.

15 CHAIRMAN PALLADINO: How many of them and how fast?

16 COMMISSIONER GILINSKY: Several. One of your
17 techniques is to try one and see what happens.

18 CHAIRMAN PALLADINO: I was going to make the
19 following suggestion. I gather that most of you can stay.
20 I would hope to get through at least by five o'clock. I was
21 going to suggest that we now ask the TMI Alert --

22 COMMISSIONER GILINSKY: Do you mind if I ask one
23 question for the Board on this question, on the actual
24 shutdown, and leave the others until later?

25 CHAIRMAN PALLADINO: Fine.

1 COMMISSIONER GILINSKY: If I could return to your
2 point about the authority to shut down the reactor, I
3 presume if the shift supervisor disagreed with that position
4 he could bring the plant back up? Or what does he have to
5 do in the event of such a shutdown?

6 And to follow that up, how high does operational
7 authority go? Who is the highest official with actual
8 authority to run the plant and give direct orders on the
9 operation of the plant?

10 MR. HUKILL: I would assume the highest position I
11 would go to is the President, Mr. Arnold, but as far as I am
12 concerned on the Island, I am the highest position. The
13 normal tracking chain on the island for events or things
14 that happen in the plant, as they call it, the Operations
15 Manager, if it is an operations-related item. If he feels
16 it is serious enough, he calls the Operations and
17 Maintenance Director, who then gets in touch with me, and we
18 make a decision.

19 MR. ARNOLD: Excuse me. Could I ask a point of
20 clarification here? I think you were asking the question,
21 though, in terms of, for example, starting the plant up as
22 opposed to shutting it down.

23 COMMISSIONER GILINSKY: Right.

24 MR. HUKILL: No one can start up the plant without
25 my permission.

1 CHAIRMAN PALLADINO: Can you start up the plant
2 without concurrence by people who shut it down, or under
3 what circumstances would you start it up?

4 MR. HUKILL: Do you mean if the reactor operator
5 has shut down the plant, could I start it up?

6 CHAIRMAN PALLADINO: Yes. Could you order it to
7 be started up?

8 MR. HUKILL: Yes, I could order it to be started
9 up. I am the Director of Unit 1. I don't think I would
10 ever do that without consulting with Mr. Arnold on what
11 happened, what the occurrence was and why we would shut it
12 down. I would certainly not do it without talking to the
13 individual who shut the plant down.

14 CHAIRMAN PALLADINO: Is that just the feeling of
15 yours or is that a practice or a requirement?

16 MR. HUKILL: I don't know. I wasn't there when
17 the plant operated.

18 CHAIRMAN PALLADINO: No, I meant now.

19 MR. HUKILL: Yes, it is certainly a requirement
20 now. It is certainly a requirement that they must have my
21 permission to start up the plant. And if it was shut down
22 by one of the operators, there is no way that I would start
23 that up until that operator was -- until I discussed the
24 situation with him, and that we were in agreement that the
25 condition for which he shut it down has been corrected.

1 COMMISSIONER GILINSKY: In other words, the
2 Operations and Maintenance Director or Manager of Plant
3 Operations does not himself have authority to start the
4 plant up?

5 MR. HUKILL: No, sir. I have that authority.
6 They have to come to me to start up that plant.

7 CHAIRMAN PALLADINO: Okay. I will give you an
8 opportunity to have some other questions. I am going to
9 thank you gentlemen for now and suggest that you yield your
10 place at the table to representatives from TMI Alert.

11 I would also welcome the Aamodt family
12 representatives to join us at the table.

13 MR. BLAKE: Whoever made available.

14 CHAIRMAN PALLADINO: Thank you.

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1 CHAIRMAN PALLADINO: I believe when we started the
2 meeting that I indicated that next we would call on the
3 representatives of TMI Alert, and I believe representing TMI
4 Alert is Ms. Joanna Doroshaw.

5 MS. DOROSHAW: That is correct. And seated to my
6 left is Louise Bradford, who was the Intervenor at the
7 restart hearings.

8 CHAIRMAN PALLADINO: Also we have as
9 representatives Mrs. Aamodt.

10 MRS. AAMODT: Marjorie Aamodt and John Cluett.

11 CHAIRMAN PALLADINO: I am going to ask first that
12 we hear from representatives of TMI Alert.

13 MS. DOROSHAW: Okay. I first would like to
14 express my outrage at the conduct of this proceeding today.
15 I am outraged, and I believe that people who live in the
16 surrounding Three Mile Island area are outraged also. We
17 have spent two grueling years going through prehearings and
18 hearings, and it has been an extremely painful experience
19 for us.

20 A very large record has been developed; a very
21 lengthy decision has been produced. We have participated in
22 these hearings against all odds. We have had very little
23 resources. Basically, the hearings financially strapped us
24 an organization. And for what? What you seem to be doing
25 here today is you are calling upon GPU executives to come up

1 here without giving us any opportunity to cross examine
2 them, to present evidence to you, so that they can give
3 their own soothing assurances that they are indeed competent
4 to run this plant, basically ignoring the record, ignoring
5 the decision and the many problems that are associated with
6 this decision.

7 We do not want to restrict your review of this
8 case. As a matter of fact, we have always wanted you to
9 review the merits of this case, as you had promised to do
10 until very recently. We think this proceeding today is
11 incredibly unfair. We also believe that it is probably
12 illegal under the Administrative Procedures Act.

13 I refer you to a case by the name of "Seacoast
14 Antipollution League versus Costle," which dealt with a
15 similar type proceeding by the administrator of the EPA
16 reviewing a decision by an administrative law judge, in
17 which he solicited reports from six outside people using
18 evidence completely outside that record, and made a decision
19 on that evidence. And the Court reversed that decision as
20 being outside of EPA, as violating the EPA Procedure Act.

21 We were not given an opportunity to cross
22 examine. We were not given an opportunity to see prefiled
23 testimony, as the NRC rules provide. What we are asking is
24 that either the Commission ignore what just happened this
25 morning and the charade and the slide shows, or look at the

1 merits of this case and examine the decision in detail, and
2 give us an opportunity to cross examine these people, an
3 opportunity for a full adjudicatory hearing as the rules
4 provide.

5 So we must object to the proceeding. We urge you
6 to look at the merits of the case. And really we urge you
7 not to continue to traumatize the people of the Three Mile
8 Island area and create this distrust that they already have
9 in this entire process.

10 You are dealing with some real people down there.
11 They need a recent decision to show them that indeed this
12 management is competent to run this plant. Without
13 effectively reviewing this decision on its merits, I do not
14 see how you can possibly do that, and by listening to these
15 people speak to you for a few hours, I do not think that
16 that is doing anyone any justice. That is why we are
17 outraged.

18 I will now continue --

19 CHAIRMAN PALLADINO: I wonder if I might ask some
20 questions.

21 MS. DOROSHAW: Surely.

22 CHAIRMAN PALLADINO: Did you not have an
23 opportunity to cross examine these witnesses during the
24 hearing process?

25 MS. DOROSHAW: Yes. In the context of an

1 adjudicatory hearing, we had an opportunity to be there.

2 But what you are doing now --

3 CHAIRMAN PALLADINO: Now, I just asked you if you
4 did not have an opportunity to cross examine them in the
5 hearing.

6 MS. DOROSHAW: Yes, as the rules provide.

7 CHAIRMAN PALLADINO: You are aware of the fact
8 that when an enforcement action is taken, such as with the
9 shutting down a plant, it is incumbent upon the Commission,
10 as soon as the conditions change that forced the shutdown,
11 to decide whether or not the Licensee can be allowed to
12 start up. That is what we are doing now, is trying to look
13 at the record and see whether or not, whether we should.

14 MS. DOROSHAW: That is exactly what I am urging
15 you to do.

16 CHAIRMAN PALLADINO: That is not a procedure that
17 is changed. That is a procedure that was announced back
18 when this hearing was ordered, and we are following that.
19 Now, with regard to the merits of the case, yes, we did
20 change. But that is something that would come after this
21 anyhow.

22 MS. DOROSHAW: Right. I am not arguing with
23 that. What I am saying is that you have a record and you
24 have a decision to look at. I do not understand why you
25 feel it necessary to have these people come and tell you the

1 self-serving statements, without giving us any opportunity
2 to even probe them.

3 CHAIRMAN PALLADINO: We did give you the
4 opportunity to submit your comments.

5 MS. DOROSHAW: Yes, we did.

6 CHAIRMAN PALLADINO: And to give them rebuttal.
7 And I think it is appropriate for us to both review the
8 record and to listen to comments that you and others may
9 have on this issue.

10 MS. DOROSHAW: Okay, I will go on from there
11 then.

12 CHAIRMAN PALLADINO: I just wanted to make sure
13 that we at least are working from the same base.

14 MS. DOROSHAW: Okay. We believe that the public
15 safety must be your first and your last consideration in
16 this case. Has management met its burden of proving to you
17 that they can operate this plant safely? Can you be
18 confident, in light of their past experience, that they have
19 the integrity and the candor and the capability to now run
20 this plant and to recognize and correct deficiencies in the
21 future?

22 We submit that the Licensee has not met this
23 burden, and we would like to at least look at the decision
24 that was handed down by the Board who did examine the
25 record, supposedly. And we note that it is our belief that

1 that decision is full of errors. It has a lot of problems,
2 and its conclusions cannot justify a determination that
3 management is capable of running this plant.

4 Let us look for a minute beyond the issue of
5 management capability and examine -- there is a lot of
6 evidence developed on this record indicating real safety
7 problems at this plant, and there is a real question whether
8 some of those problems have been corrected.

9 If you look at the Board's decision, you will see
10 over and over again that they seem to be cowed by the
11 possibility of taking these findings to the ultimate
12 conclusion of finding management incompetent. And
13 therefore, I think it consistently failed to make
14 appropriate findings at the intermediate step, that there
15 are safety problems at this plant.

16 And there are two issues which we see as prime
17 examples of this, where the Board just never gets to the
18 issue of are there really safety problems, because they just
19 seemed to be afraid to get to that issue, to make that
20 finding.

21 First of all, as far as poor past maintenance
22 problems at the plant --

23 CHAIRMAN PALLADINO: Are you saying they failed to
24 make a finding with regard to safety issues relating to
25 management competence?

1 MS. DOROSHAW: Right. What I am saying is they
2 seemed to be afraid to find management incompetent. And yet
3 there is evidence that they recognize, that seems to
4 indicate safety problems.

5 CHAIRMAN PALLADINO: Do you have such evidence
6 that you could present? I did search the record for your
7 evidence at this point.

8 MS. DOROSHAW: I think the Board in its decision
9 indicates there are several work requests -- for example, I
10 think Exhibit 40, dealing with the spurious alarm situation
11 at the plant, which is a concern that I noticed was
12 expressed this morning about the alarm situation.

13 Here is an alarm that goes off -- infrequently,
14 but it goes off -- and it is supposedly indicating a safety
15 problem. And yet the Board refuses to find -- that is an
16 item of deferred maintenance, but yet says, "Well, probably
17 it should be fixed." Well, obviously, the thing should be
18 fixed.

19 There is another example, I believe. It is
20 Exhibit 33 and 34. These are TMIA exhibits dealing with, I
21 think it is, the main water valves. And there is severe
22 recordkeeping problems on these work requests.

23 CHAIRMAN PALLADINO: Okay. Why don't you
24 continue. I am not sure what you mean by "severe
25 recordkeeping problems."

1 MS. DOROSHAW: For example, there are a number of
2 exhibits under Exhibit 33 that deal with the same problem,
3 and some of them are marked "Quality Assurance," some of
4 them are not. Some of them are marked "Nuclear
5 Safety-Related," some of them are not.

6 The Board deems this is a recordkeeping problem,
7 and we deem it is much more than that -- in fact, a
8 definitional problem, a human understanding problem of what
9 exactly is safety-related and what do these people consider
10 as safety-related.

11 And that is a severe safety problem at this
12 plant. There seems to have been no coherent definition of
13 what is safety-related, which has ever been expressed by
14 this company throughout these hearings.

15 I notice that you are requesting them to provide
16 you now with a list of what they consider safety-related.
17 Yet they have been operating and they have existing
18 operations for all this time.

19 CHAIRMAN PALLADINO: What do you mean they have
20 been operating all this time?

21 MS. DOROSHAW: Not Unit 1 since the accident, but
22 before that time, which is what our record examined. They
23 had no clear definition of what was safety-related. And we
24 believe this not only violates NRC rules and regulations,
25 but it reflects severely on whether this plant can operate

1 safely.

2 The new priority system which they have
3 instituted, Priority I requires -- one part of the Priority
4 I -- requires that someone should determine whether there is
5 an impact on safety, on nuclear safety. The new job tickets
6 they have still require people to check off whether
7 something is nuclear safety-related or not. And there is a
8 lot of confusion that we saw on the record in differences of
9 opinion by various experts that Licensee produced as far as
10 what they consider to be safety-related or not.

11 The Staff presented testimony supporting the
12 Licensee's view that basically there was not a problem in
13 defining safety-relatedness. There were no real maintenance
14 problems that reflected on safety.

15 CHAIRMAN PALLADINO: Do you not consider the
16 conditions that the Board suggested will correct this
17 situation?

18 MS. DOROSHAW: The new computer system, the new
19 priority system? All of those things, I believe, have
20 problems. There are a lot of recordkeeping problems, which
21 were demonstrated: misplaced paperwork, duplications, and
22 inaccuracies on the work request itself.

23 These new job tickets that supposedly are going to
24 be through this computer system are extremely complicated.
25 If you look at them, they have all kinds of checks, marks,

1 and requirements to put in different codes. Certainly, it
2 is not an easier form to fill out than before, and I think
3 they have given testimony to indicate that on the record.

4 CHAIRMAN PALLADINO: But have you found or do you
5 have evidence that this is an improper, unsatisfactory,
6 unworkable system?

7 MS. DOROSHAW: So far, no. The Board itself said
8 they do not know. And they are willing to give it six
9 months to see if it works, and they say that in their
10 decision. Now, what are we supposed to be? Guinea pigs?
11 They are giving them six months to see if the system is
12 going to work, and then they are going to come back and have
13 the Staff analyze it or something.

14 We just do not believe that there is any reason at
15 all why we should be living near a plant which has poor
16 plant maintenance practices, and the Board is not even
17 willing to say that this new system is good enough that they
18 are willing to give it an okay at this point. That is a
19 severe problem. We do not know. What we see are a lot of
20 problems which developed while Unit 1 was operating and we
21 do not see this new system correcting.

22 The priority system, the Board says, is radically
23 different. Its method of assigning priorities is radically
24 different. I really do not see where that is any
25 different. Someone would originate work requests and before

1 the new system they had to sign a priority, but it would be
2 approved by various supervisors and eventually go up to the
3 plant manager who could always cross it out and design his
4 own priorities.

5 So what they are doing now is having the
6 originator recommend a priority and now have their their
7 supervisors or the plant manager put an assigned priority.
8 And there is really no difference there at all. It is a
9 matter of either crossing it out or putting in another
10 blank.

11 CHAIRMAN PALLADINO: You are not objecting to
12 having the priority system, are you?

13 MS. DOROSHAW: The priority system, it seems to
14 me, is a worthwhile thing, but even at this plant they
15 refused -- this Licensee refuses to designate even a minimal
16 time frame by which Priority I's must be done. The
17 schedule, they still use these plan-of-the-day meetings to
18 schedule their work. It does not seem to me that the
19 priority system is all that important to them. They do not
20 use it for scheduling, it seems. I think they have said
21 that many times.

22 CHAIRMAN PALLADINO: How do you know that? Do you
23 have evidence?

24 MS. DOROSHAW: They have said that over and over,
25 that their primary method of scheduling maintenance work is

1 through these work-of-the-day or plan-of-the-day meetings.

2 CHAIRMAN PALLADINO: They said that they do not
3 give attention to priority?

4 MS. DOROSHAW: I suppose they do give some
5 attention to it. But they certainly do not use it as the
6 primary method of scheduling work. They do not assign, they
7 do not have a time frame by which any specific priority must
8 be done whether it is safety-related or not. They have no
9 time frames at all. And the Board agrees with this
10 practice.

11 CHAIRMAN PALLADINO: Do you have evidence that
12 they have no time frame?

13 MS. DOROSHAW: They will tell you that.

14 CHAIRMAN PALLADINO: I hate to interpret what they
15 said. I think I will let them answer that.

16 MS. DOROSHAW: It seems to me that that is what
17 they said, that they do not assign time frames at all.

18 As far as this new computer system that they have,
19 one of the big problems, one of the big recordkeeping
20 problems they had while Unit 1 was operating, was this
21 problem of misplaced job tickets. They have got now so many
22 more forms and one is going here and one is going there and
23 one is going to keypunch.

24 How is that system going to really improve what
25 was clearly a bad problem on their part? It was so bad that

1 they misplaced so many job tickets that they had to develop
2 a system on how to retract them when TMI was going through
3 the discovery process, a management decision was made to
4 hand over to the discovery room the original work requests.

5 And so many were lost, and these original work
6 requests were the official documents, supposedly, that they
7 used to comply with NRC regulations, and yet they turned
8 them over to the discovery room. They were lost. A number
9 of them are lost, and there was basically no explanation why
10 they decided to do that.

11 CHAIRMAN PALLADINO: Don't you think that deserves
12 correction, the fact that they had a system that apparently
13 lost some work orders?

14 MS. DOROSHAW: It certainly is good that they now
15 corrected that. But why did it go on for so long? The
16 problem is why did these things go on for so long? What
17 does that say about management? What does that say about
18 the maintenance department and the head of the maintenance
19 department, Mr. Shovlin, who is still in the same position?

20 The Board does not even examine his past
21 experience. When they speak of Mr. Shovlin in the decision,
22 they do not even reference what his past performance was and
23 why these maintenance problems developed.

24 CHAIRMAN PALLADINO: You said this went on for so
25 long. Could you tell me how long it went on, over what

1 period there was a gap in the records?

2 MS. DOROSHAW: A gap in the records?

3 CHAIRMAN PALLADINO: You said there were some
4 records lost.

5 MS. DOROSHAW: I cannot give you an exact date
6 because I do not remember.

7 CHAIRMAN PALLADINO: Was it many months or weeks?

8 MS. DOROSHAW: Well, yes. They examined at least
9 a year before that, a year before the '79 accident. I do
10 not know how many years back it went, but it seemed to me a
11 real problem that was developing at this plant.

12 CHAIRMAN PALLADINO: I know you had records that
13 went back several years, but I am talking about the long
14 periods that you refer to in which records were lost. I
15 just want to get a feel for what that length of time was.

16 MS. DOROSHAW: I do not really know. I know they
17 discovered that some things were lost, I believe, when they
18 started reviewing their records in 1979. I think they went
19 back and they purged all the duplicates, and they conducted
20 this massive investigation. I believe that is when they
21 discovered this problem. You might want to ask them, but I
22 believe that is correct.

23 Now, on to another problem, which is the overtime
24 problem. We believe that the Board treated this issue in a
25 most outrageous manner. There were really legitimate

1 questions that were raised by some of the testimony that was
2 presented on this issue.

3 Basically, there were three witnesses who
4 testified undisputed. They corroborated each other on many,
5 many issues. But what the Board did was it looked at the
6 differences and virtually dismissed them as being
7 subjective. Well, of course, anyone who gets up and
8 testifies is going to be subjective.

9 That is no excuse to dismiss their testimony.
10 Either you have to believe these people or not believe
11 them. If they believe these people, then certain things
12 followed from that. If they did not believe them, then they
13 had to state why they did not believe them.

14 If these people were not credible, then they
15 should have stated so. There is no evidence in the record
16 at all why they chose not to believe them.

17 CHAIRMAN PALLADINO: Could you identify which
18 witnesses you are talking about?

19 MS. DOROSHAW: Mr. Eberle, Mr. McCurdy, and Mr.
20 Reismiller.

21 CHAIRMAN PALLADINO: What did they testify to?

22 MS. DOROSHAW: As to excessive overtime in the
23 plant. They all testified there were instances of excessive
24 overtime, twelve hours a day, seven days a week, three and
25 one-half months, four months, during refueling outages. The

1 issue was not whether overtime was forced or voluntary, and
2 that seems to be what the Board focuses on. That is not at
3 all what we are talking about.

4 What we are talking about are people working at
5 that plant who are fatigued. I mean this is not a candy
6 store.

7 CHAIRMAN PALLADINO: This was during the
8 refueling?

9 MS. DOROSHAW: Yes. This is not a candy store.
10 This is a nuclear powerplant where the margin of error is
11 very small and the consequences are very huge. And if you
12 have people working there so fatigued, it is an extremely
13 serious situation.

14 CHAIRMAN PALLADINO: Did these witnesses testify
15 that the people were fatigued as a result of overtime?

16 MS. DOROSHAW: At least one of them did. One of
17 them said "Yes." At least a couple of them did. In fact,
18 they were asked point-blank, "Were you not, by the twelfth
19 hour, were you not getting tired?" And certainly, they said
20 "Yes." I mean would you not, even if you had a luncheon
21 break? If you worked twelve hours at something, you are
22 going to be tired by the end of that day.

23 And yet, it was scheduled. People could get out
24 of it if they gave enough notice. Now, what was "enough
25 notice"?

1 There was testimony that there was one individual
2 who was legitimately sick, and he could not come in. And he
3 was forced to come in. When the supervisor saw that he was
4 really sick, he said, "Okay, go home." But a letter was
5 placed in his file saying, "You did not work your
6 overtime."

7 They have guidelines now, and the Board seems to
8 be relying on the fact that while now they have these new
9 guidelines that they are going to be following, well, they
10 always had guidelines. These guidelines were waived, and
11 these new guidelines can be waived. There is really no
12 teeth to them at all.

13 There are many questions which these new
14 guidelines do not solve, such as is overtime coerced, was it
15 coerced at this plant? What about safety meetings? One of
16 the witnesses testified that safety meetings were routinely
17 canceled during refuel outages.

18 CHAIRMAN PALLADINO: During what?

19 MS. DOROSHAW: During refueling outages, safety
20 meetings were canceled, and people were conveniently not
21 told about them.

22 COMMISSIONER GILINSKY: What are the safety
23 meetings?

24 MS. DOROSHAW: Apparently, they were meetings
25 where they discussed industrial safety hazards, accidents in

1 other plants, things that were going on, ways to prevent
2 that type of thing from happening at the plant.

3 One of the witnesses testified -- and he was a
4 union representative -- that complaints of excessive
5 overtime forced him eventually to go to management to speak
6 to Mr. Arnold and Mr. Herbein and complain about the
7 excessive overtime. Basically, what he said he was told was
8 they cannot hire any more men, there are peaks and valleys
9 at a powerplant, and you have got too many people at a peak,
10 what are you going to do with them in the valleys? And the
11 faster we get the plant back on line the faster we are
12 making money.

13 Well, nothing that we saw was ever done to
14 investigate these complaints in the excessive overtime that
15 was going on. We urge you to examine the decision paragraph
16 343 as an example, a good example of how the Board again is
17 cowed at reaching this ultimate conclusion of finding that
18 there was management incompetence at this plant. They say
19 basically, "Well, TMIA did not support the fact that the
20 company maximized profits at the expense of safety." And
21 they say, "Therefore, the issue is moot because we have
22 these new guidelines now."

23 First of all, I do not understand what the
24 "Therefore" means, and I do not understand how one sentence
25 follows from the other. But also, I mean turning our case

1 in terms of inflammatory language like that, "maximization
2 of profits at the expense of safety," was not necessary to
3 do that. And we did not necessarily have to present
4 evidence to show that specific thing.

5 You know, what we are talking about is fatigue
6 problems and overtime problems.

7 COMMISSIONER AHEARNE: Excuse me. I gather
8 fundamentally you violently disagree with the Board.

9 MS. DOROSHAW: Well, yes. It is not just a matter
10 of disagreement.

11 COMMISSIONER AHEARNE: But I gather you disagree
12 that they are accurate in their statement. Is that
13 correct? I think you are taking exception to the Board's
14 descriptions; is that correct?

15 MS. DOROSHAW: You mean am I presenting exceptions
16 here?

17 COMMISSIONER AHEARNE: No. You can either
18 disagree with their conclusions, but I think it is more than
19 that.

20 MS. DOROSHAW: Definitely more than that.

21 COMMISSIONER AHEARNE: The impression I am getting
22 is you believe the Board did not describe the record
23 accurately.

24 MS. DOROSHAW: That is correct. Absolutely. And
25 did not discuss arguments.

1 COMMISSIONER AHEARNE: The section you have just
2 called our attention to, 343, does more. At least, the
3 Board describes it more. In your statement, they say the
4 record does not support your conclusion and that Mr.
5 Reismiller's testimony does not as alleged by TMIA support
6 -- a difference.

7 MS. DOROSHAW: Certainly, that was not our only
8 point.

9 COMMISSIONER AHEARNE: But I am just referring to
10 the paragraph that you refer to, so I gather your
11 disagreement is also your position would be the Board has
12 not accurately described the information they had available
13 to them.

14 MS. DOROSHAW: That is correct. That is
15 absolutely true. I believe that very strongly.

16 Let me just now address a couple of the issues
17 that were raised this morning by the various individuals who
18 were testifying. Mr. Kuhns remarked how his new management
19 structure and his new financial commitment shows a
20 commitment to technology, I believe he said.

21 I would just like to point out that we really do
22 not know whether this is a real commitment or a paper
23 commitment, because the financial issues have been removed
24 from this hearing, as you know. It is impossible to examine
25 that type of statement in detail. And I would just like to

1 point that out.

2 As far as the many statements that were made here
3 and also during the hearing that Licensee has exceeded NRC
4 requirements on various things, we would just like to know
5 -- the problem is once they have exceeded NRC requirements,
6 there is really no enforcement power anymore. There is no
7 way that you are going to be able to keep track of whether
8 they are continuing to exceed NRC requirements.

9 CHAIRMAN PALLADINO: What is the basis for that
10 statement? I do not follow that.

11 MS. DOROSHAW: The NRC examines whether items
12 revealed are items of noncompliance. At least that has been
13 our experience with the NRC.

14 CHAIRMAN PALLADINO: Is it merely because the
15 Applicant exceeded the requirements? Is it possible --

16 MS. DOROSHAW: You said they were exceeding NRC
17 requirements. Then the NRC, it seems to me, is not going to
18 make sure that they are complying with all of these
19 additional things they are promising everyone they are going
20 to do.

21 CHAIRMAN PALLADINO: Did the Staff say that? I do
22 not follow that that is necessarily so.

23 MS. DOROSHAW: It is on the record.

24 CHAIRMAN PALLADINO: I think the NRC has been
25 looking at whether or not they meet the requirements. If

1 they exceed them, it does not say, "Well, now, we are not
2 going to come back."

3 MS. DOROSHAW: According to Louise Bradford, who
4 was sitting in one of those hearings, that was indeed said
5 by the Staff.

6 CHAIRMAN PALLADINO: We will hear from the Staff,
7 I guess, later.

8 MS. DOROSHAW: Okay. Now, as far as the
9 Licensee's response to the accident, we, of course, share
10 many of Commissioner Gilinsky's concerns about the issue of
11 communications problems during the accident. If it is
12 ignored by this Commission, it will send a sound message to
13 GPU and other utilities that they can basically choose what
14 information they want made public during an emergency
15 situation.

16 COMMISSIONER AHEARNE: I gather your statement to
17 that is that you disagree with the various I&E conclusions
18 or the government conclusions?

19 MS. DOROSHAW: There are certain conclusions in
20 those reports that I do agree with.

21 COMMISSIONER AHEARNE: Regarding the particular
22 issue that you just addressed?

23 MS. DOROSHAW: As far as whether information was
24 intentionally withheld, I believe there are other
25 investigations that validly conclude differently.

1 COMMISSIONER AHEARNE: Name one.

2 MS. DOROSHAW: The Udall report.

3 CHAIRMAN PALLADINO: The Udall report in draft
4 form made that allegation, but not in the final form.

5 MS. DOROSHAW: What they basically said was they
6 understood the severity of the accident. They did not
7 relate information that they understood to be related to the
8 severity of the accident.

9 COMMISSIONER GILINSKY: If I could interject, the
10 Board addressed that point and did not see a difference.

11 MS. DOROSHAW: That is right. The Board did not
12 see any difference.

13 COMMISSIONER GILINSKY: They felt in some ways it
14 was a stronger conclusion.

15 MS. DOROSHAW: Yes. That it was a stronger
16 conclusion. It is definite that they did conclude that
17 there was information that they knew was related to the
18 severity of the accident that they did not communicate to
19 state and federal officials.

20 I believe the Udall report examines and analyzes
21 evidence differently than NUREG-0760. In fact, what I have
22 read, there are certain things they seem to mention that
23 0760 does not seem to mention. And certainly, the way the
24 Board addressed this problem was, in our view, totally
25 outrageous. Basically, what they did was they explained

1 these different conclusions and said, "Well, we are not
2 going to investigate that," and they basically blamed the
3 Intervenor for not pursuing the matter.

4 It was not our issue, it was a Board issue. And
5 there was certainly an awful lot of reason, we believe, that
6 they should have pursued the issue, and there were certain
7 instances where they could have. And they did not.

8 COMMISSIONER AHEARNE: The point I was trying to
9 make, Ms. Doroshaw, I thought you were implying that the NRC
10 had not looked at this issue.

11 MS. DOROSHAW: Oh, no.

12 COMMISSIONER AHEARNE: My point was the NRC has
13 looked at this issue. It has looked at it several times.
14 It is certainly true that some members of the Commission and
15 obviously other people disagreed with the conclusions the
16 NRC has reached each time it has looked at the issue. But
17 we have looked at the issue.

18 MS. DOROSHAW: You have looked at the issue.

19 COMMISSIONER AHEARNE: As a Commission, we reached
20 the conclusion several times on that issue.

21 MS. DOROSHAW: Yes. And I also believe that
22 basically the evidence was analyzed differently, and there
23 were valid reasons why different conclusions could have been
24 reached. I could go into the details on what I believe --

25 COMMISSIONER AHEARNE: I was just trying to point

1 out that many people have looked at the issues many times,
2 and different people come to different conclusions. But the
3 NRC, at least some segments of the NRC as a Commission, has
4 examined it, has reached its conclusion. You disagree with
5 the conclusion.

6 MS. DOROSHAW: Well, at least what I believe as
7 far as this proceeding is concerned, that this Board had an
8 obligation to pursue the matter a little bit more than it
9 did, because what we are talking about are certain
10 individuals who have been put in very high management
11 positions in this new organization. It seems the Rogovin
12 and 0760 reports were at fault during the accident in
13 certain ways.

14 There definitely was reason for this Board to have
15 pursued the issue. And that, I believe, was a great fault
16 of this decision. It certainly was not possible for us to
17 do it. We do not have the resources. The Board said itself
18 that in order, for instance, to pursue the issue of Mr.
19 Herbein, it would have required the testimony of ten more
20 people.

21 Now, certainly, they knew we did not have the
22 resources to get ten people to get up there and testify.
23 But they recognized that it was an issue that required this
24 additional testimony. And their reasoning basically was,
25 "We do not have time to pursue this. There are more

1 important things to pursue."

2 What possibly could be more important than whether
3 this management has chosen as its vice president of nuclear
4 assurance a man who has been documented to make poor
5 judgments and possibly deceive the public during an
6 emergency situation? That, I believe, is a serious fault,
7 and it is something that must be pursued.

8 CHAIRMAN PALLADINO: But it was. Inspection and
9 Enforcement people made quite a study of that. Others have
10 studied it. Now you do not like their conclusions, but it
11 has been studied.

12 MS. DOROSHAW: It has been studied, but the Board
13 basically said, "Well, they studied it. This one studied
14 it, and they have reached these different conclusions."

15 CHAIRMAN PALLADINO: I am not telling you what the
16 Board said, but you said it is time somebody studied it.
17 The answer is it has been studied.

18 MS. DOROSHAW: The Board certainly had an
19 obligation to do more than it did. I am not saying the
20 Board should have done the whole study of the entire
21 accident again. It had certain issues which this Commission
22 mandated it should consider.

23 CHAIRMAN PALLADINO: It is important to keep our
24 points straight. You must not be this fluid that when I say
25 something that you switch the point. The point is that it

1 has been studied. That is all I want to get on the record.

2 MS. DOROSHAW: Yes, it has been studied.

3 CHAIRMAN PALLADINO: Whether or not this Board did
4 it is another question.

5 MS. DOROSHAW: What I believe is the Board did not
6 fulfill its responsibilities under Board issue 10.

7 CHAIRMAN PALLADINO: Do you have more?

8 MS. DOROSHAW: Basically, there are a lot of
9 specific problems I have as far as their analysis of what
10 went on during the accident. I do not know whether you
11 would like to pursue more concerning Mr. Dieckamp's telegram
12 and his explanation today, which, by the way, was not
13 presented on the record. The Board never pursued this
14 matter with him, even though Mr. Moseley from IE, when he
15 was testifying, said basically you might want to pursue this
16 with Mr. Dieckamp, but you never did.

17 There are indications not only that Mr. Chadwick
18 and Mailer believed that there was a hydrogenic explosion at
19 that time. I think Mr. Illgees is another individual who
20 was interviewed. At least in the report, he said that that
21 day hydrogen was discussed. Whether Mr. Dieckamp believed
22 at the time he may have sent that mailgram or not, he
23 certainly had an obligation to look into it before he as a
24 representative of the company sent such a thing.

25 I believe from the investigations I have looked at

1 there are many individuals who probably would have said, if
2 asked, "Yes, hydrogen was discussed." He did not look into
3 it. And that, in itself, I believe, is somewhat of a
4 reflection on his competence.

5 He is there representing the company, and then
6 when finding out that these IE investigations, these
7 investigations of task work did reveal they did discuss
8 hydrogen, he never made any effort to change his mind or
9 communicate to anyone that, yes, indeed, these
10 investigations do exist now. That is a problem.

11 CHAIRMAN PALLADINO: Would this be an appropriate
12 time to ask other Commissioners what questions they might
13 have?

14 MS. DOROSHAW: Yes. Sure.

15 CHAIRMAN PALLADINO: It might help you get some of
16 these points articulated. If not, then I will give you a
17 chance to finish.

18 Victor or Peter?

19 COMMISSIONER BRADFORD: Let me just ask. You have
20 given me a bit of a feel for how TMI viewed and pursued an
21 issue such as information flow during the course of the
22 accident. Did you have witnesses of your own?

23 MS. DOROSHAW: We attempted to get the Udall
24 report introduced into evidence, and by the end of the
25 hearings we did discover that we did have a witness to

1 sponsor that piece of evidence. As far as getting
2 individuals, other than that appeared to testify, we never
3 had the resources to hire expert witnesses or to get any
4 type of witness up there to testify.

5 The people who wrote the congressional report were
6 very hesitant to come at all. But we did try to get them to
7 come. They were extremely hesitant, because they are in the
8 legislative arena, and they did not want to get involved in
9 this proceeding.

10 We believe that that individual could have
11 provided some very valuable testimony. And by the end, he
12 said, well, he would come if the Board so requests it. And
13 the Board did not request.

14 COMMISSIONER BRADFORD: Did you all yourselves
15 cross examine Mr. Herbein and Mr. Dieckamp?

16 MS. DOROSHAW: No. Let me explain the situation
17 we were in at that time. We had counsel representing us
18 until the middle of January. They withdrew because we were
19 unable to support them financially. What happened was we
20 needed basically a mail drop, who turned out to be Louise
21 Bradford, seated to my left, who ended up sitting through
22 the rest of the hearings that lasted another six months.
23 She had absolutely no familiarity with the background of the
24 case, the prehearing, the hearing or anything.

25 The Board did not assist her. No one really

1 assisted her in explaining what issues were coming. I do
2 not know whether you can imagine what it is like coming in
3 in the middle of an Atomic Safety and Licensing Board
4 hearing that has been going on for several months, having no
5 idea of what nuclear power is about or any of the specifics,
6 and thrust into that type of situation and having dumped on
7 you a dozen boxes of information to look through,
8 basically.

9 That is what it was. It was virtually impossible
10 for her -- and she might want to speak for herself on this
11 -- at least for a month or a month and a half to have any
12 idea of what was going on at those hearings. Basically, all
13 she could do was sit there and listen and try to figure it
14 out.

15 Now, immediately after she became an Intervenor,
16 these management witnesses came on the stand. That was the
17 first week of February, at a time when she was sitting in
18 the back of the room observing. The Board knew this, and
19 they knew very well that she was not capable. In fact, at
20 that point we did not even know that we had an interest in
21 the issue, because we did not understand even what the issue
22 was at that point. It was never explained what were these
23 Board issues and so forth.

24 So basically, that is why --

25 COMMISSIONER BRADFORD: TMIA had not filed

1 contentions on this?

2 MS. DOROSHAW: No. We had only one contention,
3 and that was to do with deferred maintenance, maintenance
4 practices, which was litigated in October. It was the very
5 first case that was put on. No Intervenor had a contention
6 in that area. It was purely a Board issue.

7 COMMISSIONER BRADFORD: So what you are
8 essentially telling us is that the Board did an adequate job
9 of developing its own issue.

10 MS. DOROSHAW: That is right.

11 CHAIRMAN PALLADINO: But with regard to your
12 contention, was that adequately presented?

13 MS. DOROSHAW: There is, from what I understand,
14 many problems with our ability to develop even that
15 contention. We desperately needed expert help, which was
16 denied. One of the main issues during that entire process
17 --

18 CHAIRMAN PALLADINO: Do you mean denied by the
19 circumstances?

20 MS. DOROSHAW: We ere denied by the Commission and
21 the Board. We were denied help by the Board. We had asked
22 on the record several times for some help in at least
23 determining what work requests were safety-related,
24 understanding the systems and the components involved,
25 extremely technical things. We had a law firm representing

1 us with really no background in this area at all. So they
2 were severely hampered in ability to put on a case.

3 CHAIRMAN PALLADINO: Do you mean you made a
4 contention for which you had no backup information? Is that
5 what you are telling me?

6 MS. DOROSHAW: We went through extensive
7 discovery, and they, because they did not have expert help,
8 determined, using the Commission basically to assist them in
9 determining the safety-relatedness, should go beyond what
10 the NRC defines as "safety-related." They determined what,
11 in their expert opinion, seemed to be deferred maintenance
12 of safety-related items.

13 And the position they took, as I understand it,
14 was, first of all, they were forced to put their case on
15 first, which was sort of an unusual circumstance, because
16 the Board believed that they did not properly respond to
17 discovery requests, which were massive, and they proceeded
18 under protest. And that is on the record.

19 They tried to get specific work requests
20 introduced and were fought on just about every one of them
21 by the licensing and the Staff as not being safety-related.
22 Well, they did not have an expert to help them on that.

23 And what they wanted was when Licensee came time
24 to rebut the testimony three months later, then they would
25 deal with that problem. Of course, by that time, Louise was

1 involved, and we basically could not rebut the case.

2 CHAIRMAN PALLADINO: Are there other questions?

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1 COMMISSIONER AHEARNE: I wonder if Ms. Bradford
2 has anything she would like to contribute.

3 MS. BRADFORD: Yes. The reason I decided to
4 question -- I admit my questions were limited, as Ms.
5 Doroshaw just explained that whole set of circumstances to
6 you, because it seemed to me that there just wasn't going to
7 be any questioning at that hearing at all.

8 Although I was very ill prepared at the time to do
9 any in-depth questioning, I at least wanted to get that on
10 the record, because it certainly seemed to me to have
11 bearing on our contention as far as management competence to
12 run a nuclear plant. So when the question came about when I
13 was attempting to get the Udall document on the record, I
14 really had no idea, since I made several abortive attempts,
15 meaning trying to bring forward a witness. And by the time
16 they appeared it was ruled untimely.

17 My attempts had always been thwarted before
18 because I didn't have sponsoring witnesses or whatever for
19 the document. And of course, I finally persuaded sponsoring
20 witnesses to come forward. They had offered to come forward
21 before if they were subpoenaed, and one was requested by the
22 Board in the other instance.

23 In that case I was ruled out as a matter of
24 timeliness. It was then found the decision that we had not
25 thoroughly pursued this item, which was not our item in the

1 first place. I only took it on because it seemed to me it
2 was not going to be pursued. I knew that the Commonwealth
3 had no interest, for some reason, in pursuing. I was then
4 chastised for not doing it in the fullest manner.

5 That leaves me wondering exactly what is going on
6 here. Other than that, the maintenance issue. When I got
7 involved I spent several weeks at the hearing and also at
8 the same time reading over and trying to understand just
9 what exactly was going on.

10 I knew that rebuttal testimony was being put on,
11 and I had been informed that, although the Board recognized
12 that I was at a severe disadvantage, no special
13 circumstances would be afforded me. And I knew there would
14 be no way to proffer.

15 So essentially I sat there through that whole
16 proceeding, and it was a learning process, so that at the
17 end of the hearing I was just about ready to start.

18 CHAIRMAN PALLADINO: Okay. Any other questions?
19 We do want to allow time for the Aamodt family. We thank
20 you, and there may be more questions if you can stay for a
21 while.

22 I wonder if we could turn now to Ms. Aamodt and
23 Mr. Clewett.

24 MR. CLEWETT: Mr. Chairman and Commissioners, I
25 have a short statement and afterwards I would like -- I

1 think probably Mrs. Aamodt has additional comments.

2 The reason that we are here is because the
3 Commission has asked all of the parties to this proceeding
4 to address the question of whether the Commission can
5 properly conclude at this stage of the proceedings, which
6 are before the hearings have been completed and before the
7 hearing judges had rendered their full decision, that
8 Metropolitan Edison management is competent to be trusted
9 with nuclear power generation at Three Mile Island again.

10 We believe the only reasonable answer to this
11 question is no. We have to object to this effort to in
12 effect short-circuit the hearings. Likewise, we note that
13 even though a specific issue yet to be resolved in these
14 hearings is the question of the adequacy of the NRC staff's
15 plan to retest operators, the current plan would start
16 retesting those operators October 21st, which is next week,
17 well before this issue can possibly be resolved.

18 And we would also therefore ask that this new
19 testing plan be postponed until the validity of it has been
20 resolved in the hearings. The simple fact of it is that the
21 hearings are not completed. Important substantive questions
22 are still being litigated which bear directly on whether
23 Metropolitan Edison management can be trusted to run the
24 Three Mile Island nuclear generating plant in even a
25 minimally safe fashion.

1 In particular, there is the question of the extent
2 to which management was involved in cheating on the NRC
3 licensing examinations, which are intended to demonstrate
4 that plant operators are competent to run the plant. If
5 Metropolitan Edison management has been directly involved in
6 cheating or if they have fostered an atmosphere in which
7 cheating was condoned, it would, we believe, have grave
8 effects on any proper decision as to whether Metropolitan
9 Edison can be trusted to run that property.

10 There is at least some such evidence. In
11 particular, we will be presenting in these hearings that are
12 still going on eyewitness testimony that an entire room full
13 of examinees at Three Mile Island were cheating, using crib
14 sheets that were printed on Metropolitan Edison letterhead.

15 We feel that it is highly improper for the
16 Commission to make a judgment as to whether Met Ed
17 management can be trusted to follow the rules and operate
18 the Three Mile Island nuclear plant with all safety, without
19 having all the facts before it. So we respectfully request
20 that the Commission refrain from making a decision, at least
21 until after the hearings have been completed and at least
22 until the Atomic Safety and Licensing Board has rendered a
23 full decision.

24 Now, even if we were to assume, contrary to the
25 fact, that the hearing had been completed and that the Board

1 had rendered a full decision, we believe it would still be
2 inappropriate for the Commission to essentially confer its
3 blessing upon Metropolitan Edison management at this time,
4 because of the errors and miscalculations in the record and
5 the limited portion of the decision that has been released
6 thus far.

7 For example, it appears that the stamp the Board
8 used in its decision was not based upon safety or public
9 interest, but upon essentially convenience to Metropolitan
10 Edison. For example, on June 28, 1979, in a meeting with
11 the NRC staff, Metropolitan Edison made a commitment that it
12 would train a total of 40 NRC-licensed reactor operators and
13 senior reactor operators. But as time progressed, it became
14 apparent that Metropolitan Edison would not be able to meet
15 that commitment.

16 The Board's response was to lower the number
17 required to 30. Even then, it allowed trainees to be
18 counted in the figure.

19 Similarly, the standards that evolved in response
20 to the Three Mile Island accident expressed in NUREG-0731
21 called for having two licensed senior reactor operators,
22 NRO's, on duty at all times. Likewise, NUREG-0737 would
23 require all nuclear plants to have two SRO's on duty at all
24 time starting July 1982. But Metropolitan Edison would have
25 had, apparently, a very hard time meeting that

1 requirement.

2 So the Board's decision would allow Metropolitan
3 Edison, unlike other plants, to replace one of those with a
4 reactor operator who had trained to be an SRO but who had
5 failed the NRC's examinations for senior NRO's.

6 CHAIRMAN PALLADINO: Are you saying this is a
7 proposal or a fact or what?

8 MR. CLEWETT: In the Board findings. I don't know
9 the number right offhand.

10 CHAIRMAN PALLADINO: Just state what you are
11 trying to tell me.

12 MR. CLEWETT: In the Board's findings, in lieu of
13 requiring two senior reactor operators on duty, it would
14 allow one of those SRO's to be replaced with a reactor
15 operator who trained for the position of senior reactor
16 operator but who had failed the test, in effect saying that
17 it didn't matter whether or not he passed the test or failed
18 the test.

19 CHAIRMAN PALLADINO: Is this something the staff
20 allows or does not allow, do you know?

21 COMMISSIONER AHEARNE: I believe the issue is
22 being addressed --

23 CHAIRMAN PALLADINO: I understand it.

24 COMMISSIONER AHEARNE: Until such time as the two
25 SRO's are required. If the rule goes into effect requiring

1 the two SRO's, then the two SRO's have to be required.

2 MR. CLEWETT: Your intention is to make that
3 applicable to Met Ed as well?

4 COMMISSIONER AHEARNE: It will be applicable to
5 every operator.

6 MR. CLEWETT: It would be theoretically possible,
7 if there were a particular set of operating conditions laid
8 out --

9 COMMISSIONER AHEARNE: When the rule goes into
10 effect on operating reactors, any operating reactor that is
11 below that has to then go to that rule unless it is
12 explicitly in the rule saying, except for. As far as I
13 know, we had not intended any exceptions.

14 MR. CLEWETT: As to the training programs
15 themselves, the Board states in its partial decision, on
16 NH-159, that Metropolitan Edison's training programs had
17 been reviewed by the NRC. However, the NRC staff in
18 Supplement 1 to its safety evaluation report states that,
19 quote: "Review and approval of the requalification training
20 program is not required prior to any restart authorization,
21 since each of the licensed personnel at the facility will be
22 required to successfully pass an NRC examination."

23 Now, at least as to senior reactor operators, this
24 seems like a bit of a Catch 22. They are saying, because of
25 the training you don't have to worry about the exam, and

1 because of the exam you don't have to worry about the
2 training.

3 There are other examples that could be offered of
4 problems with the Board's decision. But there is one other
5 question which I feel obliged to bring before you, and that
6 is the question of whether any number of examples of Board
7 error or licensee incompetence would have the effect of
8 deterring the Commission from deciding in favor of
9 Metropolitan Edison.

10 There are those -- I am obliged to tell you, and
11 perhaps you know this on your own -- there are many people
12 in the Harrisburg area and elsewhere who consider the NRC to
13 be a classic example, perhaps the classic example of a
14 captive agency, where in theory a number of different
15 players, like the Licensee and the staff, the Board and the
16 Commission, where different hats and they pat each other on
17 the back, and all agree that everything is cool and they go
18 forward, but in fact they are all members of the same club,
19 the same nuclear establishment, if you will.

20 COMMISSIONER AHEARNE: I am well aware that views
21 have been -- in fact, that is a nicer description than I
22 have heard.

23 (Laughter.)

24 MR. CLEWETT: There are other terms which I would
25 not care to bring to this meeting.

1 (Laughter.)

2 MR. CLEWETT: One would hope, one would like to
3 believe, that this is not true. There is evidence of this
4 problem, however, that was apparent at the hearings. For
5 example, when from time to time parties to the hearing would
6 break into various caucuses to discuss things, the
7 Metropolitan Edison attorneys and the NRC staff would
8 usually meet together, apparently because their perceived
9 interests are identical. Indeed, the Metropolitan Edison
10 attorneys and the NRC staff essentially shared office space
11 in Harrisburg.

12 Now the Chairman of the Atomic Safety and
13 Licensing Board for his part treated the citizen intervenors
14 with consistent scorn and the Metropolitan Edison
15 representatives with consistent deference. Because of this,
16 I think it is no wonder that the President's Commission on
17 the accident at Three Mile Island stated:

18 "A purpose of the Energy Reorganization Act of
19 1974 was to divorce the newly created NRC from promotion of
20 nuclear power. According to one of the present NRC
21 Commissioners: 'I still think it (the NRC) is fundamentally
22 geared to try to nurture a growing industry.'"

23 The President's Commission continues: "We find
24 that the NRC is so preoccupied with the licensing of clients
25 that it has not given attention to overall safety issues."

1 The Commission also stated: "We are convinced that unless
2 portions of the industry and its regulatory agency undergo
3 fundamental changes, they will over time totally destroy
4 public confidence, and hence they will be responsible for
5 the elimination of nuclear power as a vital energy source."

6 Now, one of the very clearest and most public
7 tests of whether the NRC deserves public confidence is, it
8 seems to me, how it approaches Metropolitan Edison. I would
9 urge each of you and all of you to remember that the
10 management of this company was a great deal less than candid
11 about the accident at Three Mile Island.

12 As one study independent of the nuclear
13 establishment concluded -- that is, the Udall report, the
14 House of Representatives Committee on Energy and Insular
15 Affairs, and I quote: "The record indicates that TMI
16 managers presented state and federal officials misleading
17 statements, i.e., statements that were inaccurate and
18 incomplete, that conveyed the impression that the accident
19 was substantially less severe and the situation more under
20 control than what the managers themselves believed and what
21 was in fact the case."

22 I would also urge each of you and all of you to
23 remember that that same set of managers is still running
24 things at Metropolitan Edison. As I would imagine anyone
25 can plainly see from the responses of Mr. Dieckamp today to

1 Commissioner Gilinsky's questions about not being fully
2 forthcoming, they are still not being forthcoming. They are
3 trying to cover up their role.

4 The Chairman referred to the question of sliding
5 off the point. But I think if a candid evaluation of the
6 responses of Mr. Dieckamp were to be engaged in it would be
7 seen that he was very assiduously, very diligently sliding
8 off the point and taking off cross-country whenever he was
9 asked if in fact they had been less than fully forthcoming.

10 The point is simply this: It is a political fact
11 of life that if the Commission bends over backwards to
12 accommodate Metropolitan Edison, you will not only be
13 damaging whatever public credibility you may have, but you
14 will also be violating your public trust to protect the
15 health and safety of the people in the Three Mile Island
16 area.

17 In this case, I believe that means that you must,
18 as an absolute minimum, wait until the hearing has been
19 completed and until the Board has made a full report on all
20 the issues before you give your approval to Metropolitan
21 Edison management. Moreover, I would urge that you owe the
22 people of the Three Mile Island area your assurance that
23 they will not be subject to another potentially
24 life-threatening accident, and to best do that you should
25 refrain from allowing the restarting of Three Mile Island

1 until the entire administrative process, including the
2 administrative appeals, has been completed.

3 CHAIRMAN PALLADINO: But as far as our decision as
4 to whether or not we should allow startup, that will await
5 the decision of the Licensing Board. In other words, this
6 is only a partial initial decision that we are coping with
7 and there is no reason why we can't cope with that as a
8 piecemeal part of it.

9 MR. CLEWETT: I think there are some reasons why
10 it is less than logical to cope with it, to attempt to cope
11 with it in this piecemeal fashion.

12 CHAIRMAN PALLADINO: The Commission order divided
13 the problem into two parts. One addressed management
14 competence, and then you are going to address other issues.

15 MR. CLEWETT: There apparently are going to be
16 some aspects of training that are dealt with in one or more
17 future partial decisions. Some aspects have been dealt with
18 in this partial decision, but some aspects are still in the
19 hearing stages: the whole question of cheating --

20 CHAIRMAN PALLADINO: I was going to get to that.
21 That is a separate issue, but that doesn't make it
22 inappropriate. Just because you say you think it is
23 inappropriate, that does not make it inappropriate for us to
24 take advantage of the fact that we have a partial --

25 MR. CLEWETT: In fact, when you say it is

1 appropriate it doesn't mean it is appropriate.

2 CHAIRMAN PALLADINO: Yes, it does.

3 (Laughter.)

4 MR. CLEWETT: That is the nature of being a
5 Chairman.

6 CHAIRMAN PALLADINO: No, I am sorry. There is an
7 article that says, you will proceed this way. We had that
8 portion, the initial decision by now, and there is nothing
9 that says we have to wait until the end to look at a parcel
10 of this whole decision.

11 But I wanted to assure you that we were going to
12 look at it before we make a decision. We will wait for that
13 report process.

14 MR. CLEWETT: Including the hearings that are
15 currently going on?

16 CHAIRMAN PALLADINO: On the cheating and the other
17 items.

18 MR. CLEWETT: Thank you.

19 CHAIRMAN PALLADINO: Did Mrs. Aamodt want to say
20 something?

21 MS. AAMODT: Yes. Mr. Clewett joined my effort in
22 pursuing personnel qualifications of the operators of Three
23 Mile Island several weeks ago, when I became involved again
24 because I was one of the two primary parties who had
25 contentions in this area. And although very reluctant to

1 continue this effort -- it has taken over two and one-half
2 years of my time, and it is really a good job. I filed over
3 100 pages of findings and reply findings.

4 So Mr. Clewett will be carrying on in that area.

5 I wish to just emphasize with the Commission that
6 I am very much concerned that those examinations will be
7 given again next week, before this issue has been fully
8 explored in this reopened hearing.

9 CHAIRMAN PALLADINO: Is this Board examining the
10 substance of what should be an examination or the course of
11 cheating?

12 MS. AAMODT: The conditions under which the
13 examination was given and what contributed to cheating. The
14 NRC was a party to the decision, or the staff was a party to
15 the decision as to what issues were relevant to that
16 hearing, and they agreed that the conditions under which
17 this exam was administered was a litigable issue.

18 I do hope that you will consider those comments
19 and postpone those examinations until we have had some time
20 to examine that issue in the reopened hearing.

21 Let me say --

22 CHAIRMAN PALLADINO: It is not quite clear. Maybe
23 we are getting too far afield. If I get too far afield -- I
24 don't want to get involved in the substantive issue. But as
25 far as looking at it with regard to cheating is one matter,

1 but how to offer a replacement exam, I don't find that
2 connection.

3 MS. AAMODT: You mean how the examinations will be
4 given? We want to assure that when they are given the
5 second time, since so many decisions by the Board depend on
6 this examination, that we are not discontent again if some
7 item is overlooked.

8 CHAIRMAN PALLADINO: That is the basis for your
9 comment?

10 MS. AAMODT: Yes. I purposely asked Mr. Clewett
11 to soften his remarks about the Commission because, as I
12 expressed to your Secretary, I really am pleased to have
13 this opportunity to come before you. I feel as though I
14 haven't been heard.

15 I participated very actively in the hearing. I am
16 a psychologist and I had no funds to put up a witness, so I
17 became my own witness. I cross-questioned and developed
18 over 1,000 pages of testimony in the hearing.

19 This hearing was supposed to examine on licensed
20 training in detail, and we ended up examining licensed
21 training in detail through an intervenor's efforts. I feel
22 that where the intervenors have intervened in this hearing
23 that issues have been examined. Not always have the
24 conclusions that were developed, or the evidence that was
25 developed on the record been used in the Board's

1 conclusions, but at least it is there if somebody wants to
2 look at it.

3 But where the intervenors did not participate, I
4 really feel as though crumbs were brushed under the rug.
5 This really, to me, put such a large burden on me, that I
6 did not wish to accept and do not wish to accept, in this
7 cheating incident, but feel that I as a citizen have to
8 continue because I am a resident in the area and wish to
9 continue to be a resident in this area. And it is just an
10 issue that I can't turn away from.

11 Let me say that the partial initial decision
12 mischaracterizes the evidence on the record. It goes to
13 testimony that was refuted by cross-examination without
14 acknowledging that, or disparaging that refutation. For
15 instance, in simulator training I was concerned from reading
16 the reports of the TMI-2 accident that Metropolitan Edison
17 had only used a non-replica simulator, but provided a single
18 week of annual requalification simulator training; that in
19 response to the Commission's order, item IE of the August
20 19, 1979, order, that just an additional four hours of
21 simulator training in TMI-2 events were given.

22 When I cross-questioned the witness, a consultant
23 hired by Metropolitan Edison who wrote the chapter and the
24 review of the accelerated training, simulator training, he
25 had no idea as to what the recommendations of others that he

1 quoted in his report were for a minimum amount of simulator
2 training.

3 He finally developed, after many pages of
4 cross-examination and over the lunch break, that two weeks
5 were a minimum recommendation, but then, under redirect from
6 the Metropolitan Edison attorneys, asserted that one week
7 was a sufficient amount. And the Board adopted this in
8 their partial initial decision.

9 This is just the kind of example. It goes on to
10 other issues that I raised, which were how the operators
11 react under stress. This was mischaracterized. I tried to
12 bring out the burden that is placed upon the shift
13 supervisor. This was an important part of the lessons
14 learned from the TMI 2 accident, and I am very much upset
15 about it. And I am upset about what I heard here today: one
16 shift supervisor upon restart.

17 I know there is the July 1982 requirements, but if
18 the plant should restart in January or February -- and we
19 have no control over when an accident happens. An accident
20 comes out of routine conditions with routine manning. We
21 don't know when it will happen. It happened on the back
22 shift, the TMI-2 accident did. It happened with only two
23 people in the control room and the shift supervisor as the
24 senior person at the plant.

25 And it could happen that way again. It could

1 happen with an inexperienced person with an SRO license as
2 the senior person in the plant. That is, under the
3 conditions, the license conditions that the Board suggests.

4 So here I attempted to develop in the record how
5 this shift supervisor would indeed handle an unanticipated
6 condition, communicate with the outside authorities, and so
7 forth, and this was assuming two shift supervisors, one in
8 the control room and one in charge essentially of the safety
9 of the plant.

10 The Board entertained this notion as to whether we
11 had any proof, whether Metropolitan Edison could produce any
12 proof as to whether their personnel were capable of doing
13 such a thing, whether this had been tried in the simulator,
14 whether it had been tried in their courses and decision
15 analysis, whether it was in training programs, and they came
16 up with nothing.

17 So this part of the record, which essentially
18 questions Metropolitan Edison's training program then is
19 disparaged in the decision of the Board as Mrs. Aamodt
20 saying that phones are ringing, which is a Board
21 characterization. I called it a communications burden that
22 was placed on the supervisor.

23 This is the kind of thing that troubles me and why
24 I am really very happy to be here to tell you this today,
25 because, as I said, after 100 pages of reply findings and an

1 entire summer, from May 15th until now, working on this
2 issue, typing and revising findings, replying to a
3 Commonwealth agreement -- there were two Commonwealth
4 agreements that were entered into the record, reopened and
5 entered into the record, and we then had to reply again -- I
6 feel some sense of relief in being able to come and talk to
7 you about it.

8 My findings, which were all tied strictly to the
9 record and found the Metropolitan Edison training programs
10 were extremely inadequate, were just 14 pages, without a
11 single word of my own in them. The NRC found that my
12 findings and the Commonwealth findings were essentially the
13 same in the area of licensee training. The Commonwealth
14 findings were considered by the Board to be such well
15 constructed findings that they would have taken a long time
16 to be responded to. So the Board then justifies their
17 reopening the record to enter into the agreement between the
18 Commonwealth and the licensee on the basis of saving time.

19 But the Board at the same time disparages my
20 findings, which so closely paralleled the Commonwealth
21 findings, and then did not have to look at the Commonwealth
22 findings because those findings were withdrawn. For
23 instance, we heard this morning what was learned from the
24 TMI accident was that the operators had to understand how
25 the plant operates. They had to have understanding of

1 thermodynamics, heat transfer, and fluid flow.

2 In the August 9, 1979, order at the last page it
3 references a meeting between Metropolitan Edison and staff
4 on June 14, 1979, where Metropolitan Edison promised to
5 train and license 40 operators in college level expertise of
6 thermodynamics, fluid flow and heat transfer. And looking
7 at the standards, 0731, the guidelines for management, and
8 the new 3.1, 1979 standards which evolved out of the
9 accident, they speak about a college level technical
10 expertise.

11 It was developed well in the record that this is
12 not the level to which these operators have been trained,
13 nor is it the level to which the NRC examination measures.
14 In fact, the staff testified that the NRC examination is the
15 same examination with five new questions in thermodynamics,
16 but not ones that require expertise level. In fact, the
17 level is the only one that uses, for instance, high school
18 mathematics, that doesn't carry through to the full
19 description of the plant.

20 Dr. Jordan developed that testimony in the
21 hearing. But the Board ignores that in their partial
22 decision. Management indicated this morning that the
23 operators have that level of expertise. Everyone seems to
24 be agreed that that level of expertise is needed.

25 The meeting established that those operators would

1 be assisted by a shift technical advisor, not replaced by
2 one. The shift technical advisor, of course, doesn't have
3 operating experience. His training has not been completed
4 in the college level subjects and he is not in a line
5 position in the plant.

6 So I don't believe that the NRC in writing the
7 August 9th order, nor the staff, envisioned that the
8 expertise of the shift technical advisor would replace the
9 expertise of the licensed operators.

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1 I also want to point out that the NRC does not
2 cover training, such as anticiated transient operating
3 guidelines and core mitigation. This training evidently has
4 been partially implemented, but not fully implemented. And
5 there will be evidently no indication to Staff as to the
6 competency of the operators.

7 It troubles me to hear Mr. Hukill say this morning
8 to say that he met for the first time with the operators
9 within the last month, I believe, or the last two months.
10 The testimony of the hearing and the Staff requirement which
11 Staff refused to pursue any further upon my request was that
12 the highest level of management at Metropolitan Edison or at
13 TMI should certify these operators for eligibility to take the
14 licensing examination.

15 I cannot understand what that certification was
16 based on. After the accelerated operator training program,
17 an examination was given on TMI-2 events and on general
18 training. 15 of the 31 operators who were then candidates
19 for licensing -- actually, there were three instructors, so
20 it was 15 out of 23 candidates failed that test at the level
21 that was considered -- that was set by the auditor as a
22 level for passing.

23 Eight of those 28 candidates failed some portion
24 of their written exaination, and six failed or marginally
25 passed an oral examination.

1 Now, the accelerated training was mostly review.
2 75 percent of it was review. The Board finds that this
3 accelerated program answers the Commission's order, item
4 2.1.E of the August 9, 1979, order that requires
5 augmentation of training of operators. I find that a faulty
6 conclusion.

7 In fact, after requalification training of a year,
8 another year, the operators were audited again in April of
9 this past year. And then 18 of 29 operator candidates
10 failed the general audit at the level considered required to
11 pass the NRC examination. Two weeks later, they were given
12 the NRC examination.

13 And I have a great question that that is what the
14 Commission intended when they ordered that training be
15 augmented and that audits be made and then the operators
16 would take a licensing examination. My interpretation from
17 the Staff's interpretation in their safety evaluation report
18 was that those were requirements for eligibility to take the
19 licensing examination and that they were to be independent
20 assessments in addition to the licensing examination.

21 Well, they were not independent. They were
22 mockups of the NRC examination, which troubles me. But they
23 also were failed, and these operators then were put in a
24 position of attempting somehow to pass the NRC examination.

25 CHAIRMAN PALLADINO: You said these were mockups

1 of NRC exams and that bothered you. I think almost every
2 exam I know of has had a predecessor and you use the
3 preceding material on which to guide people in their
4 training. Are you saying that they should be so different
5 that there is no relationship to what an NRC exam would be?

6 MS. AAMODT: No. From reading the Rogovin report,
7 if I could just open it, since this is one of the studies
8 that evolved out of the accident and this was the study from
9 which we learned and could be assured that TMI-1 would not
10 cause the same problem to the residents that TMI-2 did.

11 CHAIRMAN PALLADINO: I do not want to dwell on a
12 minor point.

13 MS. AAMODT: Yes. I had some question as to
14 whether these were so coachy, whether the questions were so
15 repeated that the operators could indeed have studied them.
16 There was that problem.

17 But the problem I was stressing here today, I do
18 not know, we are looking right here at the examinations, and
19 perhaps there will be some information that comes out of
20 that in this next hearing. The point I was making today,
21 though, was I felt that the Commission was looking in their
22 August 9, 1979, order item 2.1.E for independent
23 assessments, you are looking for an audit on general, the
24 first accelerated training, and then an audit on that
25 training, then an audit on things that had to do with TMI-2

1 events, then the licensing examination and the certification
2 prior to this from the highest level of management.

3 And with all of that input, there would be some
4 assurance that these operators were qualified. You see, it
5 is rather circular right now, because the Board concludes
6 that the training program is adequate on the basis of the
7 NRC examination. So a lot hangs on that examination. And
8 yet in the Rogovin report here, it says, "These examinations
9 do not even measure operator ability accurately, much less
10 ensure that an operator has the knowledge or competence to
11 operate a reactor safely when something unexpected occurs."

12 So we were assuming --

13 CHAIRMAN PALLADINO: That was their point. It was
14 when something unexpected occurs. Then I think that was a
15 valid comment. It may still be valid.

16 MS. AAMODT: I was pressing for a similar
17 examination as a witness in the hearing. I was pressing for
18 a more valid examination, which I felt could be done with a
19 simulator. But the Board overlooked that. And when I made
20 a motion just recently, they denied that in this initial
21 decision, saying I did not bring it up early enough as a
22 motion. Not knowing legal procedure, I did not know the
23 difference between the weight of the motion and a
24 suggestion.

25 And I also did not feel that I was responsible to

1 the extent of doing more than making up a recommendation at
2 point. The TMI-1 operators will not be examined on the
3 simulator. I do not know whether you are aware of that.
4 Only the candidates who have not had any experience
5 operating a reactor, they will be. But the other candidates
6 will not, whereas your NRC regulations state in 0737 that
7 candidates in RO and SRO should have licensing examinations
8 on the simulator.

9 But the Staff now reads that as if the application
10 for the examinations was made before October 1, then it is
11 not necessary to have the simulator examination.

12 I would also bring that before the Commission,
13 that it would seem that the simulator examination would at
14 least alleviate some of the concern as to whether these
15 operators can indeed react to nonroutine conditions.

16 CHAIRMAN PALLADINO: Do you have much more?

17 MS. AAMODT: No. I do not have much more. It is
18 just that I am very concerned about the kind of shift
19 staffing. But I am glad to hear that the 0737 requirements
20 of the two SROs will be in effect in July. I would hope
21 that if you should make a decision for restart, that it
22 would not be before that staffing requirement could be met
23 by Metropolitan Edison.

24 I do want to bring before you, you know, that two
25 years have gone by. Whether you are able to train your

1 operators according to objectives, clearly stated
2 objectives, whether you are able to provide enough personnel
3 to man a reactor, these are very objective standards, much
4 more than organization charts or subjective judgments of
5 consultants who are hired by the Licensee.

6 So I would ask you to look at this training
7 program and see it as a failure of management to meet an
8 objective commitment.

9 I just have a couple of more things that I did
10 want to cover. In these license conditions, the plant may
11 not have, if they are required to have two SROs, they may
12 not, of course, be able to work five shifts, they may have
13 to work fewer shifts. And one of the conditions that the
14 Board is urging to be placed on the Metropolitan Edison
15 license is that they be allowed to operate for as many as
16 ten days with using overtime only bearing in mind NRC's
17 overtime policy and using nonexperienced personnel in the
18 control room.

19 That troubles me, because it seems that the plant
20 should never be operating unless it can be operating under
21 conditions of reasonable assurance. That was a point that I
22 wanted to explore in this hearing. It was operator's hours,
23 and I was not able to make a case of nexus to the TMI-2
24 accident, which was a standard of admitted issues, although
25 it is an 0694, TMI-2-related event.

1 I would urge the Commission, having worked in this
2 area of fatigue in graduate school, admittedly it was with
3 white rats, but these studies became the basis and have not
4 been refuted, these studies became the basis for behavioral
5 theory that has stood the test of many other people's
6 experiments.

7 You asked about the control room. One of the
8 consultants from MIT, a Mr. Sheridan, brought before the
9 Board that the human being is a very poor monitor. Studies
10 show that after a half-hour he is a faulty monitor. I know
11 this is a slow-acting system. But Mr. Sheridan felt that
12 the operators would be in much better condition to respond
13 to abnormal events if they were somehow programmed into the
14 system so that they would essentially be on top of events.

15 And I think that is an important point. The Board
16 cites it as being done, just because it was in the testimony
17 of a consultant who put it in as a recommendation. So I
18 would bring that to your attention as an important control
19 room alteration that would improve the monitoring of the
20 control room personnel.

21 One other point I want to bring before you this
22 morning to refute, to rebut what was said on the infraction
23 reports. I read Mr. Copie's report, who was Licensee's
24 witness and in the first two and a half years -- statistics
25 can be worked any way you wish -- but in the first two and a

1 half years it is clearly stated that there were nearly
2 double the number of abnormal events or transients, I
3 believe it was, personnel errors at TMI-1 than there were at
4 other B&W reactors.

5 So I think, bearing that in mind, that most of the
6 agreements that the Commonwealth accepted in withdrawing
7 their contentions during their findings have found to be
8 meaningless for restart. A simulator by 1985, a part test
9 simulator by the end of next year really has nothing to do
10 with how well these operators are trained for restart.

11 Just one other point I would like to make. And I
12 know you are anxious to get on and the day is long. But Mr.
13 Hukill mentioned that they have the policy of hiring AOs,
14 auxiliary operators, from the area and then developing them
15 through the ranks to be senior reactor operators. This was
16 a policy that many of the people who studied the accident
17 advised against because they felt that although they became
18 experienced on the plant, that they very well may lack the
19 requisite skills to be able to develop an expertise level of
20 understanding how the plant operates.

21 So I was extremely surprised that this policy that
22 was advised against by the very consultants who testified in
23 this hearing and whose testimony the Board depends on is not
24 being adopted by the Metropolitan Edison.

25 COMMISSIONER AHEARNE: Just as an interjection, I

1 was surprised also.

2 (Laughter.)

3 MS. AAMODT: They say that the narrow focus --
4 that was called "mind-set psychology" where I went to school
5 -- did not like those terms. But that would be corrected by
6 procedures that the operators would have to report on many
7 key parameters.

8 One of the psychologists who testified in this
9 hearing, Dr. Gardner, who by the way was not qualified any
10 more than I am to say what the content of a nuclear
11 powerplant is, but he can testify on some of these personnel
12 things. But the Board did in fact use him as certifying
13 whether this training program was competent.

14 And another witness, which was unfortunate and at
15 the same time disparaged my credentials, which were similar
16 -- not as extensive but similar to Dr. Gardner's -- but Dr.
17 Gardner said that mind-set is essentially lack of training.
18 There can be other things in it, too, but it is essentially
19 not knowing what to do.

20 CHAIRMAN PALLADINO: Lack of proper training.

21 MS. AAMODT: Lack of proper training or some
22 problems in the training.

23 And I have tried to develop also since this
24 particular accident -- and I just want to bring this once
25 more before you, because I wrote a 14-page report to the

1 Board on this issue and did extensive research into the
2 field of industrial psychology on fatigue effects -- that
3 this accident happened, remember, between 3:00 and 4:00
4 o'clock in the morning.

5 And industrial studies document very well that
6 that particular hour has the highest probability of
7 personnel errors than any other hour in the working day,
8 which was overlooked in the study of the accident and may
9 not have any relationship, but may, also. Fatigue also can
10 narrow the scope of a person's attention.

11 CHAIRMAN PALLADINO: Thank you very much.

12 Do we have questions?

13 (No response.)

14 CHAIRMAN PALLADINO: Well, I am going to suggest,
15 if you do not mind --

16 MR. CLUETT: Mr. Chairman, if I may just very
17 briefly as a point of information in the record, the
18 Commission's attention to item 10, issue 10 of the Board's
19 issues listed for the continuing hearing the second part of
20 that is the adequacy of the Staff's plan for retesting
21 operators and monitoring its NRC examinations to ensure
22 proper adherence to NRC testing requirements and to provide
23 reasonable assurance that TMI-1 can be operated safely. I
24 just wanted to bring that to your attention.

25 CHAIRMAN PALLADINO: Thank you.

1 We still have presentation by the Staff. So if
2 you do not mind, we will yield the table to the Staff.

3 I thank you very much. I was hoping to give a few
4 minutes to the party for a quick rebuttal. We will see how
5 long the Staff takes.

6 Ladies and gentlemen, we have been sitting here
7 quite a while. I am going to suggest a five-minute break.

8 (Brief recess.)

9 CHAIRMAN PALLADINO: We will now move to the
10 presentation by the Staff. Who is going to be the
11 spokesman?

12 MR. SWANSON: I am, Mr. Chairman.

13 Mr. Chairman and members of the Commission, my
14 name is Daniel Swanson. I am counsel for the NRC Staff, and
15 I am the attorney who litigated the management competence
16 and operator training contentions during this proceeding.

17 On my immediate left is Mr. Haverkamp, who is the
18 senior resident inspector at the TMI-1 site. On his left is
19 Mr. Richard DeYoung, the deputy director of the Office of
20 Inspection and Enforcement. To my immediate right is Mr.
21 Thomas Novak, assistant director of operating reactors,
22 NRR. To his right is Dr. Stephen Hanauer, director for the
23 Division of Human Factors Safety, NRR. And on his right is
24 the project manager for the Staff for this proceeding, Mr.
25 Harley Silver.

1 As we have stated in our proceedings before the
2 Commission, this is an enforcement proceeding. The issue
3 presented by the Commission is whether the partial decision
4 issued by the Board on August 27 of this year to remove the
5 public health, safety, or interest basis from the initial
6 suspension of the TMI-1 license insofar as the management
7 competence and operator training issues are concerned.

8 The Commission requested comments by the Staff and
9 other parties regarding the merits of their decision. We
10 shall focus on the merits of that decision in light of the
11 concerns thht were raised by TMIA and the Aamodts during the
12 course of the proceeding.

13 I would like to point out for the most part I did
14 not understand TMIA and the Aamodts to be raising questions
15 about the facts that were put into evidence nor about the
16 facts that were requested to be put in evidence. Rather,
17 their concerns lay on the assertion that the Board
18 improperly weighed the evidence which was presented.

19 Therefore, the issue which can be properly focused
20 today is not whether rights are denied or whether further
21 hearings are necessary, but whether the Board reached proper
22 conclusions based on the evidence presented.

23 COMMISSIONER GILINSKY: Or whether they should
24 have looked into exhibits they did not look into.

25 MR. SWANSON: TMIA exhibits are maintenance work

1 requests which were not allowed in evidence of complaints by
2 those parties today that they in fact offered evidence to
3 the Board, which in fact was not admitted.

4 COMMISSIONER GILINSKY: Whether or not they did,
5 they thought that the Board did not do as good a job as they
6 should have. I would be interested to get your view on
7 that.

8 MR. SWANSON: I understand that to be their
9 position, and I will address that.

10 CHAIRMAN PALLADINO: Why were the exhibits not
11 admitted into this record?

12 MR. SWANSON: If the Commission would like to turn
13 to that question, I would point out -- I would point out
14 simply that there was a definition as to the proper exhibits
15 to be used for safety-related work requests. The Licensee
16 proposed one conclusion or one definition of safety-related,
17 which was set forth in paragraph 293 of the Board's
18 decision. I will not repeat that, but essentially it refers
19 to the work done whether or not the work done reflects the
20 integrity of the system, whether or not the component being
21 worked on is required for safe shutdown of the plant or for
22 mitigation of consequences.

23 The Board, however, in deciding whether or not
24 documents should be admitted on this question, utilized a
25 broader definition of nuclear safety-related. I would refer

1 the Commission's attention to paragraph 295 of that
2 decision, on the next page, where the Board indicated that
3 the test it would use in deciding whether or not a document
4 should be admitted; in other words, in the context of the
5 evidence being proposed by TMIA, whether or not those
6 documents related to nuclear safety related maintenance, the
7 test of whether the time lag involved in accomplishing the
8 work.

9 If I could diverge just for a second. "Time lag"
10 refers to the time that maintenance was improperly deferred,
11 whether or not that time lag resulted in accomplishing of
12 the work after the request results in a potential for an
13 adverse impact on safety. In other words, not the narrow
14 definition of whether the work being done was on
15 safety-related systems, but rather the work being done was
16 on a component which somehow could have an effect on
17 safety-related systems.

18 The Board found that if TMIA offered work requests
19 which met that definition, that they were in fact
20 admissible. In the Board's view, there were requests that
21 were submitted that did not even pass this broader test of
22 nuclear safety-relatedness and therefore were rejected.

23 In the context of the enforcement proceeding, in
24 light of the assertions, the Staff simply would like to
25 focus the issue on whether the disagreement of the parties

1 and whether this Commission finds sufficient disagreement
2 with the partial decision which would warrant the
3 continuation of the immediate suspension of the TMI-1
4 license.

5 COMMISSIONER GILINSKY: Say that again?

6 MR. SWANSON: In the context of the enforcement
7 proceeding, the Staff submits that the question before the
8 Commission today is whether they have sufficient
9 disagreement with the conclusions raised by the Board in
10 their partial decision, such as to rise to the level of
11 compelling safety considerations warranting exceptional
12 circumstances which, in turn, would justify the continued
13 suspension, immediate suspension of the TMI-1 license.

14 The words "compelling safety considerations" and
15 "exceptional circumstances" are taken from the Commission
16 decision in the Midland decision.

17 COMMISSIONER GILINSKY: Wait a minute. In this
18 case we say we will make the decision on the restart of this
19 plant ourselves. When we were satisfied -- the Commission
20 was satisfied -- then the plant would operate. And if the
21 Commission was not satisfied, it would not operate. I am
22 not so sure what the relevance of the Board decision is.

23 MR. SWANSON: I think the relevance of using that
24 standard as opposed to a standard which might be used in
25 deciding whether a licensing decision be made immediately

1 effective becomes important, since this is an enforcement
2 proceeding. The Administrative Procedures Act Section 9.B
3 applies. And that section would require a license to be
4 suspended only under exceptional circumstances, such as when
5 the public health and safety are affected.

6 If the original basis for immediately suspending a
7 license without first allowing a Licensee to come into
8 compliance, if that basis no longer exists, the Staff
9 submits that the Commission should and arguably must lift
10 the suspension.

11 So the question today before this Commission is
12 whether or not the Commission has concerns regarding
13 management capability and operator training as addressed by
14 the Board in its partial decision, which rise to that
15 level.

16 The Staff would submit that in fact these concerns
17 do not rise to that level. In fact, the Board properly
18 considered the issues set forth by the Commission in this
19 area, and that in fact the decision is adequately based on
20 the record.

21 COMMISSIONER GILINSKY: In terms of the
22 interpretation given this now, does this not consist of our
23 orders in this case?

24 MR. BICKWIT: The August 9th order says the
25 Commission shall issue the immediately effectiveness if it

1 determines the public health or safety does not require
2 immediate effectiveness of the suspension of this decision.
3 The Commission's decision will not affect this.

4 COMMISSIONER GILINSKY: Is this any different than
5 what you said?

6 MR. SWANSON: I do not believe so.

7 COMMISSIONER GILINSKY: All right.

8 (Laughter.)

9 MR. SWANSON: Perhaps Commissioner Gilinsky, you
10 are concerned about the specific language that I used, in
11 the "compelling safety considerations."

12 COMMISSIONER GILINSKY: As long as there is no
13 difference, why don't you just go on.

14 MR. SWANSON: The decisions are set forth in the
15 order, which this Board considered as part of its decision.
16 Those addressed management competence and operator errors.
17 The Commission, as you know, subsequently specified these
18 concerns in its March 1980 order, where eleven specific
19 issues survived.

20 I think it is important for the Commission not to
21 lose sight of the fact that the Board did address these
22 specific issues as well as the contentions raised by
23 Intervenor in this proceeding. In its partial decision,
24 again addressing the management competence and operator
25 training issues, both Aamodt Contention 22 and TMIA

1 Contention 5, which are in this area, deal primarily with
2 issue number 2 of its March 1980 order.

3 The Aamodt Contention Number 2 deals primarily
4 with the qualifications of the operating staff. And TMIA
5 Contention 5 addresses the adequacy of the maintenance
6 program.

7 Not only were the specific concerns of the
8 Commission addressed by the Board in its decision, but in
9 fact the specific contentions by the parties are as well
10 addressed.

11 Turning to the specific concerns raised by those
12 parties, Aamodt Contention Number 2 is narrowly focused on
13 the testing of Licensee technicians and management by an
14 independent engineering firm. The Board allowed the Aamodts
15 to inquire into matters well beyond the narrow scope of the
16 wording that that contention would suggest.

17 The main thrust of the contention appeared to be
18 the inadequacy of the Licensee training and testing methods,
19 including the failure to account for extraneous noise
20 interruption of operators, failure, too, of the Licensee to
21 train for stresses of really critical situations.

22 The Board did examine these areas in depth, and
23 they concluded that sufficient measures had been taken since
24 the accident to reduce noise distractions and that
25 on-the-job training in the TMI-1 training room, training in

1 the B&W training simulator, extensive training in relevant
2 areas, and training as a shift team was sufficient.

3 The Board further concluded that the Licensee
4 commitment in the future to install a simulator, a basic and
5 exact replica trainer further strengthened the Licensee
6 argument that they had in fact met their burden. The Board
7 found that much of the Aamodt Contention Number 2 was
8 satisfied by the OARP, the retraining program proposed and
9 conducted by the Licensee in response to the accident.

10 The Board found that the OARP adequately served as
11 an independent training and testing function and satisfied
12 Commission order item 1.E of its August 1979 order regarding
13 the training of operators.

14 It also satisfied the requirement regarding
15 training at the B&W simulator and the requirement regarding
16 the reexamination of operators.

17 The Board enumerated in its partial decision the
18 steps that it recognized had been taken to reduce stress and
19 concluded that sufficient measures had been taken to
20 alleviate or minimize the potential for stress.

21 The Aamodts also raised as an issue the adequacy
22 of the NRC examination, including the eligibility of operator
23 candidates. The Board found that the Staff criteria
24 provided reasonable assurance such as applicants who
25 satisfied the Staff criteria could perform license

1 activities safely and competently and that the operating
2 test assesses the overall effectiveness and scope of the
3 training program.

4 In their comments before the Commission, the
5 Aamodts also question the adequacy of the training of
6 unlicensed personnel at TMI-1. The Board there also
7 addressed that problem and found the concern to be
8 unfounded. The Board concluded that the Licensee has the
9 comprehensive and acceptable training program based on
10 modifications and improvements since the accident.

11 TMIA-5 is a five-part contention concerning the
12 adequacy of the Licensee's maintenance program in the past.
13 It specifically addresses whether safety-related maintenance
14 is deferred beyond a point established by the Licensee's own
15 procedures, whether there was a failure to keep accurate and
16 complete maintenance records regarding safety items, whether
17 a proposed 6 percent cut in the maintenance budget in 1979
18 was drastic and in disregard of safety, and whether there
19 was an extensive use of overtime in safety-related
20 maintenance.

21 A final element addressed the Staff in the quality
22 assurance and quality control programs. But this is a
23 problem that TMIA apparently has dropped. The Board found,
24 after considering the evidence, the contention to be
25 unfounded. The Board compared the old versus the current

1 maintenance system. The Board found that some problems did
2 exist with the old maintenance system but they were not the
3 type of deficiencies that TMIA claimed, such as would
4 substantiate their contention.

5 The Board, in probing into this matter, went
6 beyond the scope of the contention. It inquired on its own
7 whether properly deferred maintenance indicated a lack --

8 COMMISSIONER AHEARNE: May I ask you a question,
9 Mr. Swanson: Is the assumption from which you are
10 operating that we have not read the Board's decision?

11 MR. SWANSON: No. I was simply responding to your
12 October 6 order, which I believe indicated the parties
13 should stress those points in the partial decision which you
14 thought were critical.

15 COMMISSIONER AHEARNE: You are essentially
16 reiterating all that the Board -- which you think is germane
17 to the points you think are most critical.

18 MR. SWANSON: The thrust of my presentation was to
19 refocus the Commission's attention on the fact that the
20 Board did in fact do a thorough job in considering the
21 issues raised and that in some cases went beyond the narrow
22 concerns raised by Intervenors and inquired on its own.

23 COMMISSIONER AHEARNE: I would assume that we had
24 read it.

25 MR. SWANSON: I meant no disregard in that in

1 preparing the remarks, simply responding to what I
2 understood the request to be: to focus on the critical
3 moments of the partial decision.

4 Regarding the proposed budget cut, the Board did
5 find the budget cut was not drastic and the Board approached
6 the management decision with regard for safety. The Board
7 indicated that the Licensee had discussed this problem with
8 the Office of Inspection and Enforcement and that the cut
9 would not exclude maintenance, such as to have an effect on
10 safety as Intervenors have claimed.

11 The Board found no abuses of overtime and no
12 effects on safety-related maintenance and relied upon the
13 adoption of I&E Circular 80-02 on overtime into the
14 Licensee's general procedures, which would require plant
15 manager approval of a departure from those criteria.

16 CHAIRMAN PALLADINO: When overtime was questioned,
17 was the question of fatigue raised or addressed?

18 MR. SWANSON: There were two aspects of fatigue.
19 One aspect that Mrs. Aamodt addressed in her comments, which
20 she correctly pointed out she was not allowed to present
21 testimony on, that addressed fatigue, I believe, of
22 operators. The Board made a finding that that was not a
23 matter which had been demonstrated to have a reasonable
24 nexus to the accident.

25 Maintenance, on the other hand, and the use of

1 extensive overtime in maintenance prior to the accident, the
2 Board ruled was a relevant inquiry and that TMIA had made a
3 threshold showing that it was relevant and in fact TMIA
4 cross examined Licensee witnesses to examine the use of
5 overtime prior to the accident.

6 CHAIRMAN PALLADINO: Was the issue all with regard
7 to the accident, or are we talking about overtime generally
8 in the operation of the plant, rather the TMI-1?

9 MR. SWANSON: I believe the thrust, if not
10 entirely was essentially entirely, on the use of overtime
11 and maintenance prior to the accident during the calendar
12 year 1978 and there perhaps were examples prior to that.

13 CHAIRMAN PALLADINO: Was the overtime on TMI-1 or
14 TMI-2?

15 MR. SWANSON: I believe we were limited to TMI-1.
16 TMIA did cross examine some Licensee employees, and I
17 believe one former employee, about the use of overtime in
18 maintenance.

19 CHAIRMAN PALLADINO: Why was fatigue not counted?

20 MR. SWANSON: Fatigue was gone into. The use of
21 overtime and whether or not that caused the maintenance
22 personnel to reach a level of fatigue whereby safety was
23 assured. And the Board had made a finding that there had
24 not been any indication through the cross examination of
25 these witnesses that in fact safety had been compromised.

1 The Board did express concern that at times during
2 refueling outages working shifts sometimes extended longer
3 than twelve hours. The Board at that point relied on the
4 adoption of I&E Circular E-02, which set guidelines for
5 overtime usage and the Licensee's commitment to not exceed
6 those guidelines unless the plant manager had in fact
7 authorized such a departure.

8 CHAIRMAN PALLADINO: Was the overtime forcible?
9 Was it so forcible that individuals who were sick were
10 called in to work and then got a letter in a file because
11 they did not do that, I mean because they did come in and
12 then went home or did not come in?

13 MR. SWANSON: I think it is safe to say that the
14 record was not clear-cut on that regard. There were three
15 individuals who were examined on the use of overtime. One
16 individual indicated that he did not like overtime, that he
17 was required to come in and perform overtime once when he
18 was sick, and he had a letter put in his file when he went
19 home.

20 Another individual indicated --

21 CHAIRMAN PALLADINO: You say he was sick?

22 MR. SWANSON: He was sick and had to leave, and I
23 believe had a claim that a letter was put in his file.

24 MR. ROBERTS: The letter in the file does not mean
25 anything. It is a matter of personnel practice. Many

1 times, if you offer a man overtime he does not have to
2 accept it necessarily, but you can get into a lot of labor
3 disputes about favoritism with how overtime is awarded. So
4 the very fact that there was a letter in the man's file in
5 and of itself means absolutely nothing.

6 COMMISSIONER GILINSKY: Does that not depend on
7 what the letter said?

8 COMMISSIONER ROBERTS: Okay, I would say that.

9 CHAIRMAN PALLADINO: Was this done differently
10 than another person?

11 MR. SWANSON: I am not sure the record would
12 indicate whether or not that was a unique circumstance or a
13 commonplace circumstance.

14 COMMISSIONER GILINSKY: In presenting the Board's
15 findings, are these findings you agree with?

16 MR. SWANSON: The Staff agrees with the Board's
17 findings, that is correct.

18 COMMISSIONER GILINSKY: Otherwise, the Licensee is
19 perfectly capable of presenting the Board's findings?

20 MR. SWANSON: I have no further need to expand on
21 the Board's findings. I would like, however, to respond
22 more fully to the Chairman's question about overtime.

23 I indicated there was one individual who had
24 testified that he did not like to do overtime, and in one
25 instance he did have a letter put in his file. There were

1 two other individuals who testified to the Board. One
2 testified just the opposite: He was not required to do
3 overtime.

4 The overall conclusion of the Board was that the
5 Board did not believe that the record presented to it by the
6 rank-and-file employees demonstrated one way or the other
7 whether Licensee had a sound overtime policy. The Board did
8 rely on inspections performed by the Office of Inspection
9 and Enforcement into maintenance records, in a sample year
10 prior to the accident in 1978.

11 The Office of Inspection and Enforcement reviewed
12 maintenance-related activities to determine whether or not
13 extensive overtime was used in performance of safety-related
14 maintenance work and found no apparent basis to conclude
15 whether it adversely affected the quality of the work. On
16 that basis, the Board found that in fact the contention was
17 not substantiated, that the use of overtime was used in a
18 manner which did not compromise safety of the plant.

19 COMMISSIONER GILINSKY: Let me ask you a question
20 that the Board did not deal with, issue number 10, I think
21 it was, as fully as it should have. What is your view on
22 that?

23 CHAIRMAN PALLADINO: Could we define issue number
24 10? We had it defined earlier by Mr. Cluett in a way that I
25 can substantiate it.

1 MR. SWANSON: Issue number 10 is set forth in
2 paragraph 461. That is page 257 of the partial decision.

3 CHAIRMAN PALLADINO: Is the issue right?

4 MR. SWANSON: I believe the Licensee's response to
5 the accident, the Commission testified to the language in
6 that issue, and it is set forth in the March 1980 order.

7 MR. CLUETT: Should I respond to that now?

8 CHAIRMAN PALLADINO: I thought you had mentioned
9 issue number 10.

10 MR. CLUETT: Yes. That is one of the issues in
11 the hearings that are still proceeding. A different group
12 of issues.

13 CHAIRMAN PALLADINO: Thank you. That is what I
14 was bothered about, because I went back and tried to find
15 it.

16 MR. SWANSON: The question, I assume, still stands
17 from Commissioner Gilinsky? The parties did not raise
18 specific contentions on the management response to the
19 accident. It was an issue, however, set by the Commission
20 for consideration by the Board.

21 The Board had before it the Office of Inspection
22 and Enforcement inquiry into that matter, and the report
23 that was prepared by the Inspection and Enforcement Office.
24 And in fact, a representative of that office had testified
25 as to the conclusions.

1 The Board also had before it at various times
2 officers of the Licensee who were present during the time of
3 the accident and were available for cross examination not
4 only by the Board but by all parties.

5 The Board pointed out in this partial decision.
6 The parties were reminded that they had an opportunity to
7 propose testimony or propose witnesses on the matter and
8 that they repeatedly failed to do so.

9 COMMISSIONER GILINSKY: I want to know whether you
10 think they did an adequate job?

11 MR. SWANSON: Whether the Board did an adequate
12 job? I think it was a reasonable judgment, given the
13 circumstances, the circumstances being that there had been
14 numerous investigations into the matter by several groups.
15 The Board inquired as to whether it thought the Office of
16 Inspection and Enforcement witness thought, for example,
17 that the Udall committee report had a different data base
18 than the Office of Inspection and Enforcement. The reaction
19 of the Office of Inspection and Enforcement was, "No,"
20 essentially these groups had the same data base, but they
21 were different opinions, different treatment of the material
22 by different reviewers.

23 COMMISSIONER GILINSKY: Do you agree with the
24 conclusions of the Udall report?

25 MR. SWANSON: Do I? I personally?

1 COMMISSIONER GILINSKY: I assume you represent the
2 Staff. Does the Staff agree?

3 MR. SWANSON: I think that would be an appropriate
4 question, since the Office of Inspection and Enforcement did
5 the inquiry, I think it would be an appropriate question.

6 MR. DE YOUNG: We agree with the conclusions of
7 the report by the Inspection and Enforcement Office. They
8 are not the same as the conclusions in the Udall report. So
9 therefore, we differ in our views.

10 COMMISSIONER GILINSKY: In what respect? Let me
11 just take you back one step. You say you mentioned the I&E
12 report. You accept the Board's finding, the Board's
13 interpretation that the Board was not fully forthcoming?
14 The Board quoted from one of the findings on the
15 investigation. Two of the findings, of course, were that
16 the Licensee had not withheld information. But another
17 finding which I regard as being inconsistent with that
18 stated that the Licensee had not been fully forthcoming with
19 this data on the accident.

20 The Board then interpreted that to mean that the
21 Licensee had withheld, and they said in the sense of
22 consciously intentionally withheld in the sense of
23 consciously.

24 COMMISSIONER BRADFORD: That is page 268.

25 MR. SWANSON: Yes. And the actual decision is on

1 page 265, paragraph 463.

2 COMMISSIONER AHEARNE: You are asking Dick to
3 respond to a specific question by the Board.

4 COMMISSIONER GILINSKY: 276?

5 COMMISSIONER BRADFORD: 268.

6 COMMISSIONER GILINSKY: I am asking whether they
7 accept that reading.

8 MR. DE YOUNG: I would have to read it more
9 completely. I think one of the individuals here may know
10 more about it than I do.

11 COMMISSIONER AHEARNE: The conclusion in that
12 report, I think, as I understand it, was written by the
13 director of I&E. I think you also know that. This, as we
14 also know, as is referenced, you have a letter referenced in
15 the record, particularly, the statements were debated very
16 fully as to what exactly did each of these mean and how
17 exactly was it intended to be met.

18 And I would guess if the Commission wants to find
19 out whether I&E agrees or disagrees with the Board, then we
20 should ask the director of I&E.

21 COMMISSIONER GILINSKY: I thought this is what we
22 were here for. I do not understand.

23 COMMISSIONER AHEARNE: You, as you know, at least
24 my understanding is, we have asked the director of I&E in
25 the past that question, and we have received an answer.

1 COMMISSIONER GILINSKY: We did not have the
2 Board's opinion at that time.

3 COMMISSIONER AHEARNE: So we can ask him again, if
4 you wish.

5 COMMISSIONER GILINSKY: I assume we have his
6 representative here. We can have another session. I would
7 be happy to have that.

8 CHAIRMAN PALLADINO: I think it is appropriate, if
9 you are representing I&E --

10 COMMISSIONER GILINSKY: I do not want to force an
11 answer.

12 CHAIRMAN PALLADINO: No, I do not want to force
13 it. We have not given him a chance to answer.

14 MR. DE YOUNG: I do not know what comes before
15 it.

16 CHAIRMAN PALLADINO: You can claim not to be the
17 right person to answer it, if you feel that way. But if you
18 feel that you have an answer, this would be an appropriate
19 time. I have trouble with this interpretation of the Board,
20 because when somebody says, "I wilfully withheld something,"
21 I do intend -- I do attach to it a meaning of malicious
22 intent. And the Board says, "Oh, you shouldn't do that."

23 It says "intent" is different from "malicious
24 intent, "but malicious withholding," if you said
25 "withholding," that might imply intent, but when you say

1 "wilfull withholding," that means "malicious intent." And I
2 find it a very strnge conclusion on the part of the Board.

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1 COMMISSIONER AHEARNE: I do not view fully with-
2 holding as being contentious.

3 MR. DE YOUNG: I do not agree with that interpreta-
4 tion.

5 COMMISSIONER GILINSKY: You have been ably prompted.
6 I am with Mr. Dieckamp. I think to withhold is to do so
7 consciously, to hold back information. I don't think you
8 need any "willful" in front of it. Withhold is withhold. I
9 took that to be, although we differ --

10 CHAIRMAN PALLADINO: I'm sorry. You can withhold
11 something because of the circumstances that prevent you from
12 giving it. If I willfully withhold it I must have malicious
13 intent.

14 COMMISSIONER GILINSKY: If you can't give it, you
15 are not withholding it.

16 CHAIRMAN PALLADINO: Again, we are coming into
17 semantics.

18 COMMISSIONER GILINSKY: I asked my question and I
19 got my answer. I take it you certainly don't agree with it.

20 MR. DE YOUNG: I do not.

21 COMMISSIONER GILINSKY: You don't agree with the
22 Udall report if you don't agree with this.

23 MR. DE YOUNG: I do not.

 CHAIRMAN PALLADINO: Do you have more, Mr. Swanson?

 MR. SWANSON: I think I will not belabor the

analysis of the Board's decision. The Commission obviously
1 has read it quite thoroughly and does not need any further
2 counsel by the staff.

3 (Laughter.)

4 MR. SWANSON: Let me briefly state the staff's
5 position. The staff's position is that the Board extensively
6 relied on the evidence to substantiate the findings that are
7 contained in the decision. The Board addressed issues not
8 only raised by the Commission, but issues raised by the
9 Intervenors and application to the Board by the staff itself.

10 The staff submits that the Board findings and
11 conclusions are not sufficiently offensive to the Commission
12 so that the Commission should decline to rely on this
13 partial decision for consideration of whether -- as to the
14 management competence for training, for suspending the license.

15 Rather, the partial decision adequately is supported
16 by references to the record. So that, with the exception
17 of the operator testing issue, for which no conclusions have
18 yet been drawn by the Board, we no longer have the concerns
19 originally cited by the Commission regarding management
20 competence and operator error as a basis for taking the
21 extraordinary action of suspending the TMI-1 operating
22 license without further need to correct the actions which
23 caused the accident.

Thank you.

CHAIRMAN PALLADINO: We are open for questions.

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COMMISSIONER AHEARNE: May I ask -- I assume, Mr. Swanson, the array of individuals you have here with you are eligible for questions?

MR. SWANSON: Very happily and moreso.

(Laughter.)

MR. SWANSON: We do have representatives in the audience.

COMMISSIONER AHEARNE: Let me ask Steve Hanauer a question. Steve, this is -- Mrs. Aamodt made a point about Sheridan's recommendations. And as I gather, the Board has concluded that Sheridan's recommendations were being accepted. Are they?

MR. HANAUER: I haven't read that piece of transcript in a long time. If I understand the reference and remember what is in it correctly, neither of which may be the case, Dr. Sheridan was stating the truism that people who only monitor and don't actively intervene in the process are less likely to perceive immediately something that goes wrong.

I don't think anyone disagrees with that. There's a large body of experimental evidence to show that this is the case. As far as I know, no change has been made in the design of Three Mile Island Unit 1 to accommodate this truism. The functions which were manually effected before

1 the accident are to be manually effected now. The functions
2 which were automated before the accident are to be automated
3 following restart.

4 There is a mix of such functions. There are
5 criteria to determine which things the NRC requires to be
6 automated. Those for which there are no requirements may
7 be chosen by the licensee on the basis of various kinds of
8 cost-benefit considerations, operating quality and other
9 matters.

10 I think everybody knows that monitoring is a very
11 difficult task. That is why we have annunciators, process
12 computers. That is why we have recommended the installation
13 of safety parameter display units and other lessons learned
14 from the Three Mile Island accident.

15 But as far as I know, there has been no specific
16 response in this plant to Dr. Sheridan's views. Now, the
17 annunciator system, which is an important but not the sole
18 part of the alerting system to the operator, has been sub-
19 stantially approved, as was described to you this morning.
20 It has been coded, it has been grouped. And the presentation
21 on the process computer output terminal has been improved.

22 So that one might say that the machine terminal
23 has been made more easy to perform this difficult surveillance
test.

COMMISSIONER AHEARNE: The impression I got from

1 certainly some of the answers this morning was that Unit 1's
2 control systems were, A, different, and B, better than
3 Unit 2. Could you comment from the staff point of view?

4 MR. HANAUER: The systems are nearly identical.
5 But the presentation of information to the operator in the
6 control room, while superficially similar, is in fact sub-
7 stantially different. We performed, as somebody said earlier
8 today and as has been set forth in detail in our testimony
9 and our safety evaluation report, we performed a preliminary
10 design review of the Three Mile Island Unit 1 control room,
11 and the Licensee has performed a human factors review also
12 of that control room.

13 In doing that, I participated in this myself. We
14 then spent part of a day in the Unit 2 control room to try
15 and get a better idea if the shortcomings in the Unit 2
16 control room, which have been pointed out in great detail in
17 the investigations, have sufficiently affected the Unit 1
18 control room that additional corrections were needed.

19 We found that in fact a large number of details
20 which add up to an important difference. The Unit 1 control
21 room does not suffer to the same degree from the same
22 abominable features as the Unit 2 control room, and that with
23 some corrections the Applicant has committed to make, the
control room was acceptable for restart of Unit 1.

In the longer range, the NRR is in accordance with

1 the action plan following the TMI accident; has published
2 guidelines for a much more extensive and detailed control
3 room review, and shortly is publishing, this week in fact,
4 for draft a proposal which will come to the Commission in a
5 couple of months to require such reviews of all operating
6 plants, including, if it operates, Three Mile Island Unit 1.

7 Which long answer can be digested in the following
8 way: We reviewed it at length. It is not nearly as bad as
9 Unit 2. It has been fixed up to be adequate for restart.
10 But in the longer term a much more detailed review will be
11 recommended.

12 COMMISSIONER AHEARNE: Another question. Which of
13 the operators are we requiring, is the staff requiring, to
14 have simulator exam on TMI-1?

15 MR. HANAUER: I will give the answer in two parts,
16 The present series of examinations and the requalification
17 examinations. For the present series, we have required
18 and they have conducted on the simulator exams of all
19 people who did not previously hold licenses on one of the
20 Three Mile units. The reason for the cutoff is that those
21 people who were experienced in control room operations and
22 had experienced transients we did not feel had to be
23 re-examined on the simulator, which is a non-plant specific
simulator and for which one gets limited, useful but limited,
insight from these examinations.

1 For the future, the requalification program is
2 required to include simulator training and a simulator
3 examination.

4 COMMISSIONER AHEARNE: You say the non-plant
5 specific simulator is the one at B&W?

6 MR. HANAUER: Yes.

7 COMMISSIONER AHEARNE: Did we require all of those
8 previously licensed operators to go down and go through a
9 training period on the simulator?

10 MR. HANAUER: Yes.

11 COMMISSIONER AHEARNE: But we did not require them
12 to be tested?

13 MR. HANAUER: Not by us.

14 COMMISSIONER GILINSKY: I just want to return to the
15 point we were previously on with Mr. De Young. I believe
16 Mr. Moseley testified that, with the exception of the matter
17 of informing the NRC, the I&E and Interior Committee
18 conclusions were consistent. I think that was the word he
19 used. Are you departing from that conclusion?

20 MR. DE YOUNG: Will you say that again?

21 COMMISSIONER GILINSKY: Do you want me to read it
22 to you. He said, "With the exception of emphasis on failure
23 to notify NRC" -- that is only part of the quote, the rest
is a paraphrase -- that Udall and the 0670 conclusions were
quite consistent.

1 MR. DE YOUNG: I think I agree with Mr. Moseley
2 on that.

3 COMMISSIONER GILINSKY: "Inconsistent" means some-
4 thing different.

5 CHAIRMAN PALLADINO: Consistent on the things he
6 doesn't think are inconsistent. That's what I heard you say.

7 COMMISSIONER GILINSKY: We have the staff lawyers
8 here. I understood him to be saying that the conclusions
9 about informing the state in the 0760 report and in the
10 Interior Committee report were, quote, "consistent," unquote.
11 I don't know what he means by "consistent." I would take
12 that to mean roughly comparable. But you were saying something
13 very different before, I thought.

14 MR. DE YOUNG: I was saying before --

15 COMMISSIONER GILINSKY: It seems clear to me the
16 Interior Committee report says, yes, information was withheld.

17 COMMISSIONER AHEARNE: And the I&E report says it
18 wasn't.

19 COMMISSIONER GILINSKY: Mr. De Young is saying it
20 was not. At the same time, Moseley is saying the two
21 conclusions are, quote, "consistent," unquote.

22 COMMISSIONER AHEARNE: You are saying the Interior
23 report says clearly?

COMMISSIONER GILINSKY: Well, we can read it.

COMMISSIONER AHEARNE: Yes. I'm trying to find

the page.

1 COMMISSIONER GILINSKY: Let me read the conclusion:
2 "The record indicates that reporting to state and federal
3 officials on March 28, 1979, TMI managers did not communicate
4 information in their possession that they understood to be
5 related to the severity of the situation. The lack of
6 such information prevented such state officials from adequately
7 assessing the conditions of the plant. In addition, the
8 record indicates that TMI managers presented state and
9 federal officials misleading statements, i.e., statements
10 that were inaccurate and incomplete, that conveyed the
11 impression that the accident was substantially less severe
12 and the situation more under control than what the managers
13 themselves believed was in fact the case."

14 COMMISSIONER AHEARNE: And the previous conclusion,
15 which the Board points out was changed, was that management
16 did not provide state and federal officials information that
17 was understood by them.

18 COMMISSIONER GILINSKY: I don't see how that would
19 be changed from "what the managers themselves believed."

20 COMMISSIONER AHEARNE: I think that probably the
21 Board may not have. But my recollection from many people
22 that were involved in the discussions of these two last
23 paragraphs was that there was a difference.

 COMMISSIONER GILINSKY: Well, it is right in front

of us.

1 COMMISSIONER AHEARNE: Yes. That is probably not
2 correct. You can say, what does someone who perhaps wasn't
3 heavily involved, was there a difference. The Board did not --

4 COMMISSIONER GILINSKY: You don't have to be
5 heavily involved in the paragraph. You can read it and
6 decide whether or not you agree with it.

7 COMMISSIONER AHEARNE: Unfortunately, as I think
8 we probably know, the words in these areas are carefully
9 tuned, and there was a difference between those two paragraphs.

10 COMMISSIONER GILINSKY: What is the difference?
11 We're talking about the present version.

12 CHAIRMAN PALLADINO: I wonder if this is arguably
13 germane to the issue. When you have to get that fine and
14 that subtle to find differences, I wonder if we're really
15 coping with whether or not the situation has changed, so
16 we can be sure or not sure.

17 COMMISSIONER GILINSKY: Let me ask you in plain
18 English, do you think the company leveled with the state and
19 the NRC on a day to day basis?

20 MR. DE YOUNG: That is a clear question. I don't
21 know what you mean by "the company." There are a lot of
22 people in the company and there are a lot of people associated
23 with it. There were a lot of questions asked. There was
a lot of information transferred.

I don't believe there was intentional withholding or misleading. They may not have been all fully forthcoming. There were some that erroneously gave information that misled people. But I don't know what you mean by "the company."

COMMISSIONER GILINSKY: I think they were in a dangerous and baffling situation. We went over this before. I don't have the quote in front of me, but clearly it was beyond their experience and they knew that, it was beyond their training and they knew that. Did they convey that to the state and the federal government?

MR. DE YOUNG: I don't think they conveyed that. I know they did not convey that. I don't know that it was clear to them that it was beyond their knowledge. People hesitate to say that this is beyond my knowledge.

COMMISSIONER GILINSKY: I know people hesitate. That is exactly what we're talking about. It is perfectly natural for them to hesitate. But they have certain responsibilities to overcome that hesitation. I know it is natural to hesitate.

CHAIRMAN PALLADINO: I am sorry. You may hesitate for a number of reasons. One is that you don't know, so you don't give somebody an answer that you don't know. As a matter of fact, it would be equally misleading or perhaps even more misleading to think you know something that isn't true. If you sent forward information that had no basis, I

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1 think that would be just as misleading as sending anything
else.

2 COMMISSIONER GILINSKY: But they knew.

3 CHAIRMAN PALLADINO: Management said they did not
4 know.

5 COMMISSIONER GILINSKY: I thought Mr. Dieckamp
6 said that they did. They were put in a completely new
7 situation, fundamentally strange I think was the word that
8 he used. Did they say that they were in a fundamentally
9 strange situation? I don't think so.

10 CHAIRMAN PALLADINO: I wonder if we're getting
11 anywhere on that. We have hammered this a good bit today.
12 I think you have gotten as much information as you are going
13 to get. We may have differences of opinion, but I don't think
14 we are going to get any more information, and I think we are
15 going to have to weigh that information we have and make
16 whatever judgments we can make.

17 COMMISSIONER GILINSKY: I have a few other questions,
18 but I will ask those later.

19 CHAIRMAN PALLADINO: There isn't much later left.

20 I do have a deep-seated concern and I would like
21 to have the staff address it. The TMI accident was in part
22 due to a whole series of faulty maintenance actions: valves
23 that were closed that should not have been closed, tags that
covered things on the control board. That relates to some

of the points that were being made by the Intervenors on
1 quality control and recordkeeping.

2 Has the staff made a determination -- I would
3 like to have it described briefly -- that the quality control
4 and recordkeeping is now adequate so that we don't get into
5 that kind of a situation? In other words, is the quality
6 control and maintenance corrected enough so that we can have
7 confidence that this kind of thing won't be a part of TMI-1
8 restart?

9 MR. SWANSON: I think since the Office of
10 Inspection & Enforcement has conducted investigations on this,
11 it might be appropriate for them to respond.

12 MR. HAVERKAMP: Inspections were conducted on the
13 program areas. A majority of those inspections have shown
14 an adequate level of compliance.

15 CHAIRMAN PALLADINO: Inadequate?

16 MR. HAVERKAMP: An adequate, a level that is
17 adequate.

18 There was a fairly recent inspection which comes
19 to mind, looking at the implementation of certain areas of
20 quality assurance programming. Our correspondence is still
21 being drafted related to that inspection. There was one
22 finding, for example, related to drawings where we felt that
23 there were inadequate drawing controls, drawings used by the
plant.

1 In another area we found that there were perhaps
2 inadequate controls of certain records used in terms of their
3 ultimate storage. Those were two specific areas. The only
4 other areas that I am aware of in quality assurance were to
5 our satisfaction.

6 CHAIRMAN PALLADINO: On the checkoff of these
7 items, they shouldn't wait until -- I don't remember your
8 exact words.

9 MR. HAVERKAMP: Are you addressing the exact words
10 relating to quality control for maintenance activities
11 specifically?

12 CHAIRMAN PALLADINO: Yes. Well, go ahead.

13 MR. HAVERKAMP: There was one of the findings,
14 for example, that had to do with hold points and the job
15 tickets. The licensee has adopted the Board's recommendation
16 and we examined that change in their policy and practice
17 and found it acceptable.

18 There was a very recent inspection just last week.

19 CHAIRMAN PALLADINO: Let me go back to a yes or
20 no question. Are you satisfied that maintenance quality
21 control program was an adequate one? Are you satisfied with
22 that?

23 MR. HAVERKAMP: At this time I have to say no.

CHAIRMAN PALLADINO: What is it going to take to
get it to that point?

1 MR. HAVERKAMP: We are reviewing and we have not
2 yet reached a conclusion. We really haven't completed our
3 review yet of the quality control listing, which is related
4 to the new quality assurance program, which identifies both
5 safety related and important to safety type categories for
6 quality.

7 Our inspection was completed last week and we are
8 still discussing with the licensee the results of that
9 inspection. We really haven't reached a conclusion yet, so
10 we have to determine whether there is a problem that needs
11 correction.

12 COMMISSIONER GILINSKY: How does that affect your
13 general recommendation?

14 MR. HAVERKAMP: Our inspections have not yet been
15 completed that we feel are necessary to reach any fully
16 satisfactory conclusion for our restart.

17 COMMISSIONER GILINSKY: Was this a qualified
18 recommendation you are then making to the Board?

19 MR. HAVERKAMP: In most program areas -- the
20 quality assurance program covers many areas. In most areas
21 of the program -- in staffing, qualifications of people, the
22 program itself is written and the operational quality
23 assurance plan procedures are developed. Most of those areas
have been found acceptable.

1 COMMISSIONER GILINSKY: What was your recommendation
2 to the Board?

3 MR. SILVER: If I can interject. Perhaps I can
4 point out that the essential difference -- or the recommenda-
5 tion to the Board was that the quality assurance program is
6 generally acceptable. I should emphasize the word "program,"
7 which of course is what NRR staff reviews and did review
8 and recommend to the Board that the program in all of its
9 aspects is in fact acceptable.

10 I&E, of course, is charged with verifying the
11 implementation of the program, and I suspect that the
12 inspections that Don is referring to have to do specifically
13 with the implementation rather than with the program itself.
14 There are many such aspects, obviously, that are still being
15 inspected at the site and will continue to be.

16 CHAIRMAN PALLADINO: When we make our decision,
17 we have to have a degree of satisfaction not only with the
18 program but with the way it is carried out.

19 MR. SILVER: That is correct. That will be part
20 of the staff certification to the Commission if such certi-
21 fication is made.

22 CHAIRMAN PALLADINO: I certainly would be looking
23 for that before I would venture a decision.

MR. SILVER: That will be forthcoming.

MR. HAVERKAMP: The inspection program that we are

1 implementing is a special inspection program. It is almost
2 complete in the program areas. It should be complete by the
3 end of this next month or early next month. It won't be until
4 that time that we will have reviewed each of the areas that
5 we felt were necessary to review, as described in Supplement 1
6 to NUREG-0680.

7 MR. SWANSON: If I might refer to paragraph 358
8 where that specification was specified, the Board referred
9 to the testimony of I&E where I&E was referring to the
10 programs and proposed corrections to account for prior
11 deficiencies, and if this program was deficient and if the
12 changes and modifications are fully implemented the staff
13 believes that it will be adequate to satisfy staff.

14 CHAIRMAN PALLADINO: Do you have a question for
15 staff?

16 Okay, we want to thank you. I gather Commissioner
17 Gilinsky has some remaining questions that he did not get a
18 chance to ask of the licensee. If you could keep the
19 questions short and the answers short, it will be beneficial
20 in the interest of time.

21 Would you mind, rather than taking time, would
22 you mind answering them from where you are.

23 COMMISSIONER GILINSKY: I'm wondering, who is in
charge of the plant, or who would be in charge of the plant
on a day to day basis? Who is the chief operating official?

1 Would that be Mr. Hukill or is that the manager under him or
2 the one under that?

3 MR. ARNOLD: We again run the risk of getting into
4 semantic problems here. Mr. Hukill located on site full time
5 and he is responsible for day to day operations at the site.
6 His operations and maintenance director, Mr. Toole, obviously
7 is the one in the line structure who provides the most
8 direct management supervision of the operation and maintenance
9 activities on a day to day basis.

10 But we have put Mr. Hukill at the site for the
11 purpose of having his level of experience and background
12 available day to day for the overall direction of operations
13 and maintenance.

14 COMMISSIONER GILINSKY: The person in actual
15 charge of the operation of the plant I presume would be the
16 man under the operations manager.

17 MR. ARNOLD: If I understand your question,
18 Commissioner, I would say the shift supervisor is the person
19 on a shift to shift basis who is actually responsible for
20 the condition of the plant at a given moment and for
21 responding to changes and to direct the control of it.

22 COMMISSIONER GILINSKY: Who is over him?

23 MR. ARNOLD: Over him is the operations manager.

COMMISSIONER GILINSKY: That is who?

MR. ARNOLD: That is Mr. Ross. Mr. Ross reports

to Mr. Toole, as does the maintenance manager, Mr. Shauvlin.
1 And Mr. Toole reports to Mr. Hukill.

2 MR. HUKILL: Just for example, Mr. Toole is the
3 operations and maintenance director, and runs the daily plan
4 of the meeting. He runs the 1600 planning meeting with his
5 maintenance director and with his operations director and
6 his other managers. But he directly reports to me, every
7 single day, probably 15 times a day, and he directly works
8 for me in controlling the people in the plant. The direct
9 orders to the people in the plant and his managers would
10 come from him, but I directly control his operations.

11 I do not run the plan of the day. He runs the
12 plan of the day.

13 COMMISSIONER GILINSKY: Do you have experience in
14 the commercial side of nuclear power?

15 MR. HUKILL: I had one year with Burns & Rowe as
16 an architect in the architect-engineering business. My
17 experience is 22 years in the United States Navy.

18 COMMISSIONER GILINSKY: Thank you.

19 I want to ask Mr. Dieckamp -- actually, we took
20 it as a measure of your dissatisfaction with the way the
21 instruments were handled. I don't want you to cite specific
22 instances, but I wonder if there have been any other actions
23 of this sort, if performance evaluations took account of
actions on that day or subsequently in handling information,

1 both to the state and federal government or to the company
2 itself. I wonder if you could characterize the company's
3 handling of this?

4 MR. DIECKAMP: Other actions have been taken and
5 do relate more broadly to the question of the individuals'
6 performance, not this specific aspect of communications, but
7 I think more nearly to the question of were they properly
8 understood, or exhibited the level of understanding that was
9 necessary and whether he was able to carry out his duties
10 in a way that would be considered acceptable.

11 Mr. Arnold testified to that specific issue in
12 the ASLB hearings and, without again going into personalities,
13 there is at least one individual within the plant at the
14 time of the accident that is no longer with the company.
15 I think it is fair to say because of our performance
16 appraisal that he is not with us. One other individual who
17 was present in the early hours of the accident has been
18 assigned to other duties.

19 Again, what we have tried to do is we have tried
20 to look at all of these investigations, all of the observa-
21 tions, and we have tried to make judgments about what that
22 means in relationship to people's capabilities. We have made
23 other judgments about what people are capable of doing and
we have tried to realign the organization so as to best
utilize the people, taking into account that which we

learned about them in the course of the accident.

1 COMMISSIONER GILINSKY: But these actions were
2 not specifically related to your concerns about the
3 dissatisfaction with the information flow?

4 MR. DIECKAMP: No, not information flow
5 specifically, not concerning a question of whether we thought
6 someone was forthcoming or truthful, because we did not feel
7 that that was an element of the problem. We felt that the
8 fundamental problem related to the insufficient gathering
9 of information, the insufficient assessment of the informa-
10 tion, the insufficient ability to understand that that
11 information meant. That is what we felt was the fundamental
12 failing and that is the factor that we have taken into
13 account in looking at how to best utilize the people
14 resources.

15 COMMISSIONER GILINSKY: I am wondering if you or
16 someone else could clear up a residual question I have about
17 the circumstances of that day. At one point you stopped,
18 closed the steam dumps. There is some suggestion this was
19 a result of pressure from the state, or you might have done
20 it on your own.

21 I wonder if you could clear that up?

22 MR. DIECKAMP: Is there anyone here who was
23 involved in that? You hadn't gotten to the site at that
time, had you, Jack?

1 MR. ARNOLD: I think Mr. Herbein is probably the
one to address that.

2 COMMISSIONER GILINSKY: I'll tell you why I ask,
3 and this may help you. Mr. Miller's testimony, who indicates
4 that he felt that holding onto that was important for
5 safety, and I wonder what the reasoning was in closing the
6 steam dumps.

7 MR. HERBEIN: As I understood the situation, we
8 weren't getting very good heat transfer, if any, through the
9 steam generators. There was a concern in my mind that we
10 had radioactively contaminated the second plant earlier through
11 a tube leak in one of the steam generators. So it seemed
12 to me that it might be possible that we were releasing
13 radioactive steam.

14 I wasn't sure about that, but complaints had come
15 in from the state, and I can't identify exactly where they
16 came in, whether they were into the control room or whether
17 they came into the observation center. But in view of my
18 uncertainty about the release of radioactive steam, as well
19 as the concern expressed by the state and the feeling that
20 there was heat removal through periodic opening of the
21 power operated relief valve and that flow injection up
22 through the core and out through the relief valve, I directed
23 that the steam dumps be closed.

COMMISSIONER GILINSKY: Let me tell you a little

1 further why I asked this, because I had a nagging wonder
2 whether an unwillingness to tell the state just how serious
3 things might then -- had you told the state, listen, this is
4 pretty serious, we have to release that steam, would it have
5 made them quickly back off?

6 MR. HERBEIN: Sir, there was no reluctance in my
7 mind to share with the state the information that I had. On
8 whether the situation that existed at the time as I understood
9 it -- in retrospect, I think we all recognize two and a half
10 years later that we all know a lot more about that accident
11 and the implications that various events that occurred on that
12 day actually had.

13 I arrived at the site at quarter of 12:00,
14 talked to Mr. Miller on the telephone, got an understanding
15 or at least thought I had an understanding of the situation
16 in the plant and where they had been. En route to brief
17 the Lieutenant Governor in Harrisburg, I did brief the press
18 on the lawn of the observation center and indicated to them
19 that radioactivity had been released offsite. It was about
20 a tenth the level of our general emergency at that time.
21 And while we were concerned with the health and public
22 safety, we did not feel that the public at that time was in
23 danger.

I answered various other questions, and it seemed
to me at the time we talked that the press in some instances

1 displayed a hostile attitude, and I didn't understand that
2 for many weeks, until later I recognized that it may have been
3 due to the information lag that occurred later that morning,
4 with the public relations department in Reading putting out
5 information that was possibly an hour to two hours different
6 from the actual plant condition at that time.

7 I am speaking specifically to whether or not
8 radiation was released offsite. Following that briefing or
9 question and answer session that I had with the press, I
10 proceeded to Harrisburg with Mr. Miller and Mr. Koonter and
11 briefed the Lieutenant Governor for an hour or an hour and a
12 half.

13 In the course of those discussions, I had no
14 intention of deceiving anyone or withholding information or
15 trying to paint a rosier picture than I guess I actually
16 myself believed we had. We had spent the morning occasionally
17 trying to run the pumps. That afternoon the strategy was
18 to blow down the system through the power operated relief
19 valve and try to get on heat.

20 I was confident at the time I discussed the
21 situation with the state that we in fact would have the decay
22 heat river pumps on by nightfall and thereby would have
23 established forced cooling. In retrospect, I look back at
my performance specifically on that day and the performance
at the control room and the folks who were at the plant, and

1 I see now that there were an awful lot of miscalculations,
2 errors of judgment, omitted information, information that was
3 not properly communicated. But in no case do I feel that
4 there was any intent to deceive, either on my part, on the
5 part of Gary Miller, or on the part of the plant. We simply
6 were faced with a situation that we did not totally understand
7 at the time and probably did not recognize that we did not
8 totally understand it.

9 We responded to the best degree that our training
10 and understanding, that our training permitted.

11 COMMISSIONER GILINSKY: Let me ask you about those
12 steam dumps. I thought Mr. Miller said they had taken
13 measurements and were confident that the steam was not
14 radioactive. Did you not fully believe that?

15 MR. HERBEIN: He stated that they used radioactive
16 monitors and the monitors gave no indication of radioactivity
17 in the steam. I had no way of assessing the sensitivity of
18 the monitors or of some information that I had been given
19 about a radioactive sample that had been taken from the
20 secondary of one of the steam generators, coupled with the
21 fact that there were apparently some sample lines mislabeled,
22 so that one could not tell whether the A steam generator or
23 the B steam generator was in fact the one that had been
drawn, and whether in turn we isolated the radioactive one,
which possibly had the leak, and had the nonradioactive one

one line or vice versa.

1 COMMISSIONER GILINSKY: It was primarily the
2 concern with release of radioactivity that led you to have
3 the steam dumps closed?

4 MR. HERBEIN: Yes, that is true. Yes.

5 COMMISSIONER GILINSKY: Thank you.

6 CHAIRMAN PALLADINO: The hour is late, but I had
7 indicated that I would allow the parties who wished to have
8 opportunity. They can have three minutes worth of rebuttal.

9 COMMISSIONER BRADFORD: Excuse me. I have one
10 leftover question of the nuclear people, whether Mr. Arnold
11 or Mr. Clark. When we were talking earlier about the
12 relationship between the plant and the dispatcher, I didn't
13 have at my fingertips the testimony that had raised my
14 concern. I have since found it.

15 Let me just read you about five sentences and you
16 tell me what the significance is of what it is that I am
17 reading. What is under discussion is a concern relating to
18 the leakage past valves. The person who is talking is
19 Mr. Chuck Mell, who at least at that time was a Met Ed
20 employee. Here is what he is telling the Senate investiga-
21 tors:

22 "As a matter of fact, I believe we calculated the
23 leakage rate prior to the accident. I believe they called
up. You have to get permission to shut down, to get off the

grid, so to speak. You call the dispatcher. I don't know
1 if it is Lebanon or Reading, we have a dispatcher phone in
2 there to shut down, to come off the grid, where you try to
3 set it up so the other plants, people at those plants that
4 come on line to carry the extra load, they will be ready.
5 You call up and try to schedule an outage.

6 "I believe some time before the accident they
7 called and asked for permission to shut down just to fix
8 those valves. To the best of my knowledge, they were denied
9 the permission at that time."

10 MR. ARNOLD: If I could take the first part of
11 that, I think that what is being described there is the
12 effort that is made to schedule shutdowns of the plant, the
13 timing of them, to make it convenient to the operation of the
14 system as a whole. But that was not the case then, and I
15 don't believe the individual testifying would have been
16 trying to represent that in the event of a safety issue,
17 safety question, that the people at the plant did not have
18 the authority to take the plant off line without receiving
19 permission from the dispatchers.

20 Obviously, for a variety of reasons, you try to
21 give as much notice as you can. You also try to schedule it
22 at a time that has the least impact on the cost of energy.

23 In terms of the speculation, as I understood it
to be, that a request had been made to take the plant off

the line and that request denied, I would say two things:

1 One, that the dispatcher does not have the authority to
2 deny a request that the plant says is necessary in the way
3 of taking the plant off the line; and secondly, that I am
4 not aware that any such request was ever made. A discouragement
5 of the plant to go ahead and proceed with it, that
6 could be followed up if desired, as much as the dispatchers'
7 conversations are all recorded, I believe, at least the ones
8 that come over the operating lines.

9 MR. CLARK: I think it is helpful to distinguish
10 between when a plant decides to shut down and when they
11 would like to shut down to be convenient. In the first case
12 they shut it down, as Mr. Hukill said, and they do not ask
13 permission and need not. In the second case, it is a question
14 of when it is convenient to have some work done on it. They
15 would talk to the dispatcher in order to determine a
16 convenient time. I think you have to keep those two different
17 situations clearly distinct.

18 COMMISSIONER BRADFORD: And you think this is
19 the second situation?

20 MR. CLARK: Yes, sir. I am not personally aware
21 of the circumstances. I don't know who Mr. Meld is, but I
22 do know the instructions as they exist today.

23 MR. ARNOLD: I am not confident that it is either
one, inasmuch as if the plant decided that they needed to

1 take -- the plant management felt it was necessary or should
2 be the case to take the plant off the line to do maintenance
3 on the valve. there is no question in my mind that that
4 would be scheduled to be done.

5 I suspect the person -- frankly, I do not recognize
6 the name -- had wrong information, that the plant management
7 had not decided that it would be desirable to take the plant
8 down to fix the valves.

9 COMMISSIONER BRADFORD: How much of a chore would
10 it be to actually recover the conversation?

11 MR. ARNOLD: Certainly, to find out whether it
12 exists and if it does exist try to transcribe that, it's not
13 too large a chore

14 COMMISSIONER BRADFORD: Would you have any
15 objection to my asking for a transcript of whatever
16 conversation Mr. Meld would be alluding to? It isn't
17 necessarily going to govern my judgment about the outcome
18 of this proceeding one way or the other, but I must say it
19 is an area of concern that I have, not just for this plant
20 but with others as well.

21 CHAIRMAN PALLADINO: Could you supply that?

22 MR. ARNOLD: I will make two qualifications. One
23 is, unless it came in over, unless the conversation took
place over the dispatcher's operating line, it would not be
recorded, probably. To my knowledge, it wouldn't. And I'm

not sure how long we retain the records of those.

1 COMMISSIONER BRADFORD: If it exists.

2 MR. ARNOLD: Was the name of the person Noel?

3 COMMISSIONER BRADFORD: Mr. Charles Mell, M-e-l-l.

4 I was quoting from the interview of Chuck Mell conducted by
5 the Subcommittee on Nuclear Regulation of the Senate Public
6 Works Committee on August 22, 1979. And I can give my copy
7 of that to whomever in your company can make best use of it.

8 MR. ARNOLD: Our best information now is he is a
9 member of the maintenance department.

10 COMMISSIONER BRADFORD: Okay.

11 It was not in this interview, so there is nothing
12 in the information --

13 MR. ARNOLD: We will try to recap that to you.

14 CHAIRMAN PALLADINO: I do want to end this meeting
15 by 6:00 o'clock and I did offer a short rebuttal to any of
16 the parties who want it. It will be by the clock, so when
17 I say three minutes I am going to ask the Secretary over
18 there to time it.

19 Would the licensee like to make any rebuttal
20 remarks?

21 MR. BLAKE: Mr. Chairman, I think it probably goes with-
22 out saying that I have disagreements with many of the things
23 that the Intervenors have talked on today. I think it is
fair to say they have many disagreements with the licensee

and the Board's determination, the judgments which the Board reached.

I think it is a well-reasoned decision. I do not plan to comment specifically on the items, and I am sure that through the appellate process their views will once again get an opportunity to be aired, as they already have been and have been considered by the Board.

There is one item, however, that has been raised today and which has not been formally the subject of formal pleadings by us, nor of formal determination by the Commission, and that is with respect to a determination or potential determination by the Commission to allow the restart of the unit by lifting the suspension of operation of TMI-1 prior to the outcome or the reopened hearing on cheating. That is not a subject we have requested the Commission to act on at this point. It is not one the Commission has formally acted on.

I do not think it is appropriate at this time for the Commission to make a formal determination. I am not asking for one today. We don't yet have the remainder of the Licensing Board's determinations in this case on many important issues, on planning and design modifications. I think only at that point in time, once we have an otherwise acceptable record and that were the only item, would it be appropriate for us even to request the Commission to

entertain a restart.

1 But I should say that if we had those determinations
2 in hand today I would be asking that question, because I do
3 not see that that issue as it has currently been configured
4 and based on the staff's investigations to date and the lack
5 at this point of any implication of involvement in this, that
6 it should stop the unit, with all that is different now from
7 the point in time when the Commission first suspended TMI-1's
8 operation.

9 CHAIRMAN PALLADINO: This is a question you hope
10 one day we will answer.

11 MR. BLAKE: I'm sorry, I didn't hear.

12 CHAIRMAN PALLADINO: This is a question you're
13 asking us eventually to answer.

14 MR. BLAKE: This may well be a question I will
15 be back here, either in pleadings or in person, to request.
16 We may be facing a considerable length on reopened hearing,
17 months and months beyond when we otherwise would be ready to
18 operate.

19 CHAIRMAN PALLADINO: Your three minutes are up.

20 Ms. Doroshaw?

21 MS. DOROSHAW: Well, first I would like to say
22 our disagreements with the decision are not just differences
23 of opinion. We really believe that is not a well reasoned
decision and there are serious errors in the decision.

1 There are very many arbitrary rulings made. There were
2 arbitrary rulings made during the course of the hearing
3 specifically affecting the presentation of our evidence
4 during the case. We believe the Board was quite confused
5 on the standard by which to admit evidence. We believe that
6 that alone is a serious error on their part.

7 As far as what the staff has said and their
8 support of the auditability of maintenance records, we don't
9 believe the report which they submitted to the Board is
10 well reasoned or is adequately supported. We don't believe
11 that the staff was particularly anxious to look at the issue
12 at all. In fact, it seemed that the Board had disagreements
13 throughout the hearing on whether past maintenance practices
14 were even relevant at all to this proceeding, whether they
15 were relevant at all to management capability, and I think
16 the Board even disagreed with them on that.

17 So they started with what we believe is a
18 predisposition, and we were not really -- we did not
19 adequately address the issue.

20 And as far as their comments on overtime, it
21 wasn't a matter of, well, one person didn't like it and one
22 person did like it. The person who didn't like it felt there
23 was definite coercion going on. He had to leave the plant
because he believed he was under duress, and he believed in
fact that those letters that were placed in the file were

instruments of coercion on the part of management. It wasn't
1 just a letter placed in the file. It was an instrument of
2 coercion. That is another issue that I think needs to be
3 considered.

4 CHAIRMAN PALLADINO: Thank you.

5 Mr. Clewett or Ms. Aamodt?

6 MS. AAMODT: Mr. Chairman and Commission: I just
7 want to express again -- or not again to you, but I want to
8 express something that I felt again today, and that is that
9 the NRC does not regulate the Metropolitan Edison at this
10 particular reactor in an objective manner. And I think
11 perhaps the realization of that throughout this hearing was
12 to me a sadder realization even than the mismanagement and
13 reluctance of management to correct their errors and present
14 a suitable program.

15 The NRC claims that all of the documents that
16 were requested were put on the record. That was not true.
17 All relevant documents. The Board referred specifically to
18 0731, which are guidelines for utility management, and 3.1,
19 1979, and ANS 3.1 1978. These documents were not put on the
20 record, although the Board finds that training and personnel
21 qualifications meet these standards.

22 I specifically requested to have them put on the
23 record, but that request was denied.

The staff misunderstands the scope of

1 I was interested that the training of all personnel and
 2 abilities of all personnel were upgraded to meet the
 3 requirements of their job, similar to the ANS 1979, ANS 3.19
 4 1979 standards which were a task position analysis and then
 5 a description of the training program.

6 The Aamodt contention was no longer pursued in the
 7 area of licensee training simply because of lack of my own
 8 resources to pursue all licensee training and management
 9 training. I found, though, uniformly that the Board's
 10 assessment of training programs, except in the area of
 11 licensed personnel, where intervention brought out a number
 12 of items, was just that a list of courses sufficed as a
 13 Board and staff review.

14 The staff says that the OARP, the operator
 15 accelerated retraining program, satisfies Aamodt Contention 2.
 16 I don't know how that could satisfy that contention when the
 17 staff made no review of that program and the results of the
 18 audit following that program were dismal.

19 I want to bring before the Board, too, management's
 20 reluctance to eliminate environmental stress in the control
 21 room. I attempted to litigate this -- I just have one more
 22 comment. I attempted to litigate this in the hearing, but
 23 this opportunity was denied.

Management has not done simple things, like carpet

1 the area to make it more comfortable for the operators who
2 stand, and eliminate glare and things like that that could
3 be quite easily done. And management also -- I would like
4 to point out their reluctance in not instituting a training
5 program for management who has no plant experience, until
6 this condition was forced on them as a term for withdrawing the
7 Commonwealth's findings.

8 CHAIRMAN PALLADINO: Your time is up. I'm sorry.

9 MS. AAMODT: Can I just take one more question?

10 CHAIRMAN PALLADINO: No. You have already said
11 one more point.

12 MS. AAMODT: Thank you very much. Okay.

13 CHAIRMAN PALLADINO: I really have a meeting
14 that begins at 6:00 o'clock and it is over on the other side
15 of town. I am really pressed for time. I think you have
16 made all your points already.

17 MS. AAMODT: Thank you.

18 CHAIRMAN PALLADINO: Could we have the three
19 minutes for the staff?

20 MR. SWANSON: Thank you, Mr. Chairman. I think
21 the proper time for extensive rebuttal of the points made
22 today is in the appellate process. I would like to respond,
23 however, to one request that was made of the staff by the
Aamodts, that regarding the exam, that does affect the
staff directly. I simply state that the staff position is

1 that the exam should not be postponed. The issue of the
2 substance of those exams, whether or not they are adequately
3 a measure of the knowledge gained by the candidates, was
4 resolved by the Board and is not before the Board in the
5 hearings.

6 As Mr. Aamodt correctly pointed out, it is the
7 manner in which the test is administered which is before the
8 Board. The Commission has delegated the responsibility to
9 administer the exams to the staff and the staff believes it
10 is the proper conduct of this responsibility to administer
11 the exams, and in fact has already begun the process.

12 Thank you.

13 CHAIRMAN PALLADINO: Thank you.

14 Well, I appreciate the input from all of the
15 parties. I know we have a lot of deliberating to do. We
16 have a lot of absorbing to do and a lot of reflecting to do.
17 You have helped us greatly by your input.

18 Unless there is anything further coming before us,
19 we will stand adjourned. Thank you.

20 (Whereupon, at 5:57 p.m., the meeting was
21 adjourned.)

22 * * *

NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the
COMMISSION MEETING

in the matter of: PUBLIC MEETING - Continuation of Oral Presentations
TMI-1 Restart

Date of Proceeding: October 14, 1981

Docket Number: _____

Place of Proceeding: Washington, D. C.

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Marilyn Shockey

Official Reporter (Typed)

Marilyn Shockey

Official Reporter (Signature)