

ORIGINAL

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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IN THE MATTER OF:

METROPOLITAN EDISON COMPANY

(Three Mile Island Station,  
Units 1 and 2)

DOCKET NO: 50-289-SP

(Restart Remand on  
Management)

LOCATION: HARRISBURG, PENNSYLVANIA

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DATE: TUESDAY, NOVEMBER 27, 1984

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of: :
:
METROPOLITAN EDISON COMPANY : Docket No. 50-289- SP
: (Restart Remand on
(Three Mile Island Nuclear : Management)
Station, Unit No. 1) :
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University Center  
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Harrisburg, Pennsylvania 17110

Tuesday, November 27, 1984

The hearing in the above-entitled matter resumed,  
pursuant to recess, at 10:00 a.m.

BEFORE:

JUDGE IVAN W. SMITH, Chairman  
Atomic Safety and Licensing Board  
Nuclear Regulatory Commission  
Washington, D. C. 20555

JUDGE SHELDON J. WOLFE, Member  
Atomic Safety and Licensing Board  
Nuclear Regulatory Commission  
Washington, D. C. 20555

JUDGE GUSTAVE A. LINENBERGER, JR., Member  
Atomic Safety and Licensing Board  
Nuclear Regulatory Commission  
Washington, D. C. 20555

## APPEARANCES:

Sim 2

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25On Behalf of the Licensee:

ERNEST BLAKF, ESQ.  
DAVID R. LEWIS, ESQ.  
Shaw, Pittman, Potts & Trowbridge  
1800 M Street, N. W.  
Washington, D. C. 20036

On Behalf of Three Mile Island Alert:

LYNNE BERNABEI, ESQ.  
Government Accountability Project  
1555 Connecticut Avenue, N.W.  
Washington, D. C. 20036

JOANNE DOROSHOW, ESQ.  
The Christic Institute  
1324 North Capitol Street  
Washington, D. C. 20036

On Behalf of the NRC Staff:

JACK R. GOLDBERT, ESQ.  
LOIS R. FINKELSTEIN, ESQ.  
Office of the Executive Legal Director  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

On Behalf of the Commonwealth of Pennsylvania:

THOMAS Y. AU, ESQ.  
WILLIAM DORNSIFE, ESQ.  
Department of Environmental Resources  
101 South Second Street  
503 Executive House  
Harrisburg, Pennsylvania 17120

On Behalf of the Witnesses:

MICHAEL F. McBRIDE, ESQ.  
LeBoeuf, Lamb, Leiby & MacRae  
1333 New Hampshire Avenue, N.W.  
Washington, D. C. 20036

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C O N T E N T S

<u>WITNESSES:</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>	<u>BOARD</u>
JOSEPH CHWASTYK (Resumed)					
By Mr. McBride	29,271				
By Mr. Goldberg		29,277			
By Mr. Blake		29,296			
By Judge Linenberger					29,359
By Judge Smith					29,374
By Mr. McBride			29,378		
By Ms. Bernabei				29,379	
By Mr. Au				29,405	
By Mr. Goldberg				29,405	
By Mr. Blake				29,406	
By Ms. Bernabei				29,416	
By Judge Smith					29,419
By Ms. Bernabei				29,425	

BRIAN ALLEN MEHLER

By Ms. Bernabei 29,428

Luncheon Recess - 29,306

LAY-IN DOCUMENTS

(None)

E X H I B I T S

<u>EXHIBIT NO.</u>	<u>IDENTIFIED</u>	<u>RECEIVED</u>
TMIA Exhibit No. 16	29,385	

(10:00 a.m.)

## P-R-O-C-E-E-D-I-N-G-S

1  
2  
3 JUDGE SMITH: Are we ready to proceed. There are  
4 several preliminary matters.

5 Last week, Mr. Dusak, who is the librarian of the  
6 State Senate, contacted us and asked that we assist in the  
7 recovery of a wooden gavel and a marble base which was missing  
8 from the Senate caucus room after our meeting there week  
9 before last.

10 Judge Linenberger and Judge Wolfe recall seeing  
11 someone pointing the gavel out to us in case we needed to  
12 use it, but after that we have no further information about  
13 it and it is, apparently, a historical item.

14 So, if anybody has any information about the missing  
15 items, I would appreciate if they would contact -- either  
16 let us know about it or contact Mr. Dusak. I have his  
17 phone number. It is 787-6120.

18 He asked that we all check our boxes and so forth  
19 to see if it might have fallen in there, but I don't think  
20 that is very likely, because it is a marble base and it is  
21 rather substantial and would be quite heavy.

22 MR. GOLDBERG: Judge Smith, I have a little bit  
23 of information on that which I will pass on to you right  
24 now. When I entered the hearing room on the first day, I saw  
25 the marble base and the gavel, and I believe I pointed it out

1 to someone that it was there, and I believe at that point that  
2 it was on -- in the back of the room by the books. There  
3 are some law books on the back where people had been putting  
4 coats and things like that, and I saw it there on that first day  
5 and I don't even know whether I looked there after that, but  
6 that is the first and only time I recall seeing that.

7 JUDGE SMITH: Well, that might be helpful to him,  
8 because he is under the impression it was on one of the  
9 circular tables.

10 MR. GOLDBERG: Well, I can call him.

11 JUDGE SMITH: Another item is that I received a  
12 letter from David Gamble, in which he requested that we post-  
13 pone any date for his appearance, pursuant to the subpoena,  
14 because he is seeking the advice of the General Counsel of the  
15 NRC as to whether his appearance would violate the Federal  
16 conflict of interest statutes, and he alludes to the Ethics  
17 in Government Act.

18 He attached his letter to General Counsel Herzel  
19 Plaine, and two attachments which have already been served  
20 in the proceeding. I sent him a letter yesterday telling  
21 him that until further notice, the subpoena is suspended.  
22 So we will have to deal with that, Ms. Bernabei. Whatever  
23 you want to do, we are open for discussion, but to give him  
24 the immediate relief that he required, we suspended the  
25 subpoena.

1 MS. BERNABEI: I received a copy of the letter  
2 also on Monday.

3 We are really quite disturbed by the whole  
4 proceeding. As Mr. Gamble lays out in his letter, he has  
5 come to understand that the office of General Counsel has  
6 begun an investigation or inquiry to determine whether or  
7 not it wishes to claim that the Ethics in Government Act  
8 applies to him.

9 This is not being done in the open. Mr. Goldberg  
10 has not publicly made that claim, and I see this basically  
11 as an attempt to intimidate and harass him.

12 It seems to me that that is improper, and that  
13 this Board should do something to ensure that that not  
14 occur. I think on the face of it, the Ethics in Government  
15 Act doesn't apply. Mr. Goldberg has not been forthright  
16 in informing the Board whether or not the agency intends to  
17 apply that to Mr. Gamble, and I think that all this should be  
18 done in the open if this is what is going on.

19 But I think some kind of internal investigation  
20 by the Office of General Counsel can't be seen as anything  
21 else other than an attempt to intimidate Mr. Gamble from  
22 testifying.

23 I would also note that I think this Board has  
24 certain responsibilities to ensure that he feels free to come  
25 to testify, given the Board's own comments last week about

1 his testimony being simple and naive.

2 I don't think that was proper. I think we  
3 certainly appreciate the fact that the Board realized that,  
4 but I think the sum total of the agency's internal investigation  
5 into Mr. Gamble's what I think is a frivolous claim that the  
6 Ethics in Government Act applies; and second, this Board's  
7 comments have frankly intimidated him from testifying, and  
8 I think it is this Board's responsibility to ensure that  
9 that doesn't go on.

10 And I think the violation of TMIA, my client,  
11 due process rights to call witnesses if they are going to be  
12 harassed in this fashion.

13 So, frankly, that is our position, and we think  
14 the Board has the responsibility to take certain steps to  
15 ensure that Mr. Gamble feels comfortable in testifying, and  
16 if that requires telling the Staff our finding is the Ethics  
17 in Government Act doesn't apply, this man is free to  
18 testify here, fine.

19 I think we have laid out in our motion for  
20 certification, which all the parties should have right now,  
21 our position is that the Ethics in Government Act is  
22 before the Appeal Board now with regard to the Galinsky and  
23 Bradford testimony. But I think with Mr. Gamble, there is  
24 not even a shred of argument that it applies to him, and  
25 I think Mr. Goldberg has been wise enough not to make that



1 claim.

2 The most he has said in the prehearing conference  
3 is that he would advise Mr. Gamble that the Act exists, and  
4 advise him to take a look at it, but he has not made a formal  
5 claim for the Agency, that in fact it applies to Mr. Gamble's  
6 testimony, because I think it is a frivolous argument.

7 In any case, I think the sum total of it has been  
8 that the Agency's actions in this proceeding have had the  
9 affect of intimidating Mr. Gamble from testifying.

10 MR. GOLDBERG: Judge Smith, I have some comments  
11 to make about this matter. There are some things which Ms.  
12 Bernabei said which are certainly correct, and I would like  
13 to emphasize them.

14 The Staff has not taken the position on whether  
15 Mr. Gamble's appearance would constitute a violation of the  
16 Ethics in Government Act, nor have we taken a position on  
17 whether former Commissioners Galinsky and Bradford's testimony  
18 in this proceeding would constitute violation of the Ethics  
19 in Government Act.

20 As I indicated at the prehearing conference I  
21 believe, questions of conflict of interest, Ethics in  
22 Government Act, and Part 0 of the Commission's regulations  
23 are something within the province of the Office of General  
24 Counsel, and the Staff does not have a position on that.

25 I did indicate that a question was raised concerning

1 Mr. Gamble's appearance, and for that reason, I believe that  
2 it was important that if he did testify in this proceeding  
3 it would be some clear indication from Mr. Gamble himself  
4 that he has reviewed the relevant provisions of Part 0 and  
5 the Ethics in Government Act, and was making an informed  
6 decision that he wished to appear and testify.

7 Beyond that, we have no position on whether there  
8 is a problem with Part 0 or the Ethics in Government Act.

9 With respect to Mr. Gamble's statement that  
10 he has learned or been informed that there is an investigation  
11 of some sort as to whether his appearance would constitute  
12 a violation of the Ethics in Government Act, I have absolutely  
13 no knowledge of that.

14 If the Office of General Counsel is looking into  
15 that, I just have absolutely no knowledge or information on  
16 that. It certainly is not the case that the Staff is looking  
17 into that, or that the Staff is pursuing that.

18 We have objected to Mr. Gamble's testimony on  
19 grounds of materiality and beyond the scope of this  
20 proceeding. We have not objected to his testimony on the  
21 grounds that it would constitute some kind of conflict of  
22 interest.

23 End l.  
24 SueT fols.

#2-1-SueT

1 I received Mr. Gamble's letter mid-afternoon  
2 yesterday shortly before leaving to return to Harrisburg  
3 here. There are a number of matters which are discussed  
4 in there of which I have absolutely no firsthand knowledge.  
5 There are some matters in there, however, which I do have  
6 some firsthand knowledge and would like to indicate to the  
7 Board that to the extent that the Board in any way is  
8 going to rely on the statements made in Mr. Gamble's letter  
9 that there are a number of erroneous statements and extremely  
10 misleading statements in there.

11 Perhaps it's useful to explain the background  
12 of the situation which Mr. Gamble describes in his letter.  
13 When the Staff identified Mr. Moseley as a witness in this  
14 proceeding, TMIA responded by identifying a Mr. David  
15 Gamble as a witness who would testify on their behalf.

16 TMIA stated, I believe, that he would testify  
17 as to the adequacy and the deficiencies in the investiga-  
18 tion into information flow which led to NUREG 0760. In  
19 response to TMIA's identification of Mr. Gamble as a witness  
20 in the proceeding, I prepared interrogatories on behalf of  
21 the Staff, served them on TMIA, inquiring about TMIA's  
22 position and the position of the witness that they had  
23 identified, Mr. Gamble, on the alleged inadequacies in the  
24 investigation into information flow and in the resulting  
25 report, NUREG 0760.

#2-2-SueT

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At about the same time as these events were unfolding, there had been a number of telephone calls from Ms. Bernabei to me requesting certain documents. I asked the Staff to attempt to identify the documents Ms. Bernabei had described and upon their failure to identify in their files all the documents that Ms. Bernabei had requested, I was asked by Ms. Bernabei to seek those documents from the Office of Inspector and Auditor.

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I indicated to Ms. Bernabei that OIA was not a Staff level office but that I would pass on her request to OIA to see whether they had the documents which she sought. There were several of those requests from Ms. Bernabei, and each time I contacted OIA and asked them to search their files to see whether they had the documents which Ms. Bernabei sought.

The person that I spoke to in OIA who had been, prior to these telephone calls as a matter of fact, involved in searching for documents responsive to one of TMIA's FOIA requests and their written document request to the Staff was a Mr. Ron Smith. During a number of conversations with Mr. Smith concerning TMIA's requests for documents he brought up with me the fact that Mr. Gamble had been identified as a witness by TMIA and expressed his opinion that --

#2-3-SueT

1 are you referring now?

2 MR. GOLDBERG: Mr. Ron Smith in the Office of  
3 Inspector and Auditor.

4 JUDGE SMITH: Oh, all right.

5 MR. GOLDBERG: He expressed his opinion that  
6 I ought to contact Mr. Gamble directly about his appearance  
7 here. I discussed that suggestion with my office, and we  
8 concluded that it was the wiser course to make sure that  
9 all communications with TMIA and with the witnesses who  
10 were identified by TMIA as appearing in support of their  
11 case were fully in the open, on the public record, and that  
12 the appropriate way to do that was via interrogatories in  
13 the normal course of discovery by one party against another  
14 party to learn the substance of their testimony in the  
15 proceeding.

16 We determined that it was the wiser course to  
17 not make personal contact with Mr. Gamble because there  
18 had already been in this proceeding a claim that one attorney  
19 who contacts another party's witness was engaging in conduct  
20 which was not proper. And in order to avoid even the ap-  
21 pearance of impropriety my office determined that the wiser  
22 course was to not personally contact Mr. Gamble.

23 As I understand it, Mr. Ron Smith had numerous  
24 conversations with Mr. Gamble about his appearance here.  
25 At no time did I assure Mr. Gamble anything as suggested in

#2-4-SueT

1 his letter. I never talked to Mr. Gamble until he appeared  
2 here last week, and the substance of my conversation was,  
3 "Hello, glad to meet you." And to this day, that's the  
4 extent of my conversations with Mr. Gamble.

5 During some of Ms. Bernabei's calls to me re-  
6 questing documents, she indicated that Mr. Gamble informed  
7 her of these documents and believed that these documents  
8 were in Mr. Gamble's old files when he was a member of OIA.  
9 I passed that information on to OIA. They requested their  
10 documents on these subject matters from a warehouse and  
11 searched those files, and ultimately we did produce to  
12 TMIA all the documents that OIA could find in their files  
13 which were responsive to TMIA's oral document request.

14 The only thing that I can interpret that Mr.  
15 Gamble is referring to concerning explicit assurances from  
16 me, as he states on Page 2 of his letter, was my statement  
17 to Mr. Smith in OIA that pursuing discovery against another  
18 party via interrogatories is a standard practice in NRC  
19 proceedings and other proceedings. That's the only con-  
20 nection I can make between the claim that I made some  
21 explicit assurance to Mr. Gamble.

22 I guess that's a sufficient background for the  
23 purposes of trying to explain what Mr. Gamble might be  
24 suggesting with this letter and the situation in which he  
25 finds himself. As I said, I have no information or knowledge

#2-5-SueT

1 at all about any part of this Commission pursuing the  
2 question of whether there is any problem with Mr. Gamble's  
3 appearance. The Staff's position is that his testimony in  
4 its entirety is not material and outside the scope of this  
5 proceeding.

6 MS. BERNABEI: May I --

7 JUDGE WOLFE: Excuse me, Mr. Goldberg --

8 MR. GOLDBERG: Yes.

9 JUDGE WOLFE: -- am I correct in recalling in  
10 your initial statements that neither you or someone from  
11 OELD had spoken to Mr. Gamble and somehow or another in-  
12 dicated that his presence as a witness might present a  
13 problem?

14 MR. GOLDBERG: No, sir. I never spoke to Mr.  
15 Gamble nor did anyone in ELD to my knowledge, nor did any-  
16 one else a part of the NRC Staff.

17 The only person within the Commission that I'm  
18 aware of who spoke to Mr. Gamble is Mr. Ron Smith from  
19 the Office of Inspector and Auditor. I had conversations  
20 with Mr. Smith concerning TMIA's document request, and in  
21 those conversations Mr. Smith brought up with me Mr.  
22 Gamble's appearance and informed me that Mr. Smith and Mr.  
23 Gamble had had a number of conversations about his appearance  
24 here to testify.

25 But I had no contact at all with Mr. Gamble.

#2-6-SueT

1 JUDGE WOLFE: Well, then I do, I guess, under-  
2 stand from what you are saying that I misunderstood what  
3 your opening remarks were. I had thought you indicated  
4 that someone from Staff had indicated to Mr. Gamble there  
5 might be a problem with his coming forward and testifying.

6 MR. GOLDBERG: I stated to the Board at a pre-  
7 hearing conference on this subject that I believed an issue  
8 was raised in connection with Mr. Gamble's appearance. I  
9 alluded to that, but indicated that we did not have a  
10 position merely that because one has to ask the question as to  
11 whether there is a problem with his testimony because he is  
12 a former NRC employee, that Mr. Gamble make an informed de-  
13 cision as to whether he wishes to appear here and testify,  
14 and that that was his personal decision and that I was just  
15 concerned that it be an informed decision. And, then once  
16 he has made that decision, then he would appear and we  
17 would state our position on his testimony, which was that  
18 it was not material and not necessary to a decision on  
19 this issue but we would not have a position at all because  
20 it's not the province of OELD on the Ethics in Government  
21 Act.

22 END #2  
23 Mary flws



Sim 3-1

1 MS. BERNABEI: Can I answer a few of the points  
2 raised by Mr. Goldberg? First of all, I think he has not  
3 addressed the central point of Mr. Gamble's letter, that is,  
4 that he is afraid to testify in this proceeding and he feels  
5 intimidated because of an ongoing investigation by the  
6 agency.

7 JUDGE SMITH: Well, what is this investigation?

8 MS. BERNABEI: All I know is what I read in the  
9 letter. I don't know. But I assume the Office of General  
10 Counsel is conducting an investigation. I would assume that  
11 prior to coming here Mr. Goldber would have found exactly  
12 what it is.

13 JUDGE SMITH: Well, I am not aware of any  
14 investigation.

15 MS. BERNABEI: Well, I think someone -- I think  
16 the Board is responsible for ensuring the witnesses that  
17 appear here are not intimidated.

18 JUDGE SMITH: We will come to that. But, in the  
19 first place, I see no need on debating the intimidating effect  
20 of an NRC investigation when we are not aware of any such  
21 investigation, and I really doubt whether there is one.

22 Who do you think is making this investigation?

23 MS. BERNABEI: I don't think Mr. Gamble would  
24 have made a statement such as this in his letter unless he  
25 had been informed that that was in fact the case. I think

Sim 3-2

1 someone here should take the responsibility to find out whether  
2 or not there is an investigation or not.

3 JUDGE SMITH: I think maybe he has inferred  
4 that there is an investigation from the general discussion  
5 of the Ethics in Government Act.

6 MS. BERNABEI: I don't think that is right. I  
7 think he has been informed. That is what he letter states.

8 JUDGE SMITH: Well, couldn't he say so then? He  
9 is writing to the reputed investigator. I would imagine if  
10 he had information that he was being investigated, that if  
11 he had specific information that he would have said so to  
12 the General Counsel. But I will tell you this. I will find  
13 out. I mean I will ask the General Counsel if you want me  
14 to if they are investigating him. I doubt if they are. We  
15 will come back to his intimidation, however, in a moment.

16 MS. BERNABEI: Okay. And, secondly, Mr. Goldberg's  
17 comments at an earlier time, at the prehearing conference,  
18 I think has to be taken, if not as a threat, as of some kind  
19 of interest on the part of ELD, the Office of Executive Legal  
20 Director, in possibly asserting that the Ethics in Government  
21 Act applies. Why else would he mentioned it?

22 JUDGE SMITH: All right. To the extent ---

23 MS. BERNABEI: Mr. Goldberg is not -- let me just  
24 state my reasons.

25 JUDGE SMITH: All right. Excuse me.

Sim 3-3

1 MS. BERNABEI: Mr. Goldberg is not Mr. Gamble's  
2 attorney, No. 1. No. 2, under the NRC rules or regulations  
3 there is a specific prohibition on any office in the NRC  
4 offering an interpretation to a former employee of the  
5 Ethics in Government Act other than the Office of General  
6 Counsel.

7 I think Mr. Goldberg's remarks at the prehearing  
8 conference, however tenuous and however advisory, is in fact  
9 a violation of those regulations in that he was attempting to  
10 advise Mr. Gamble that that provision may apply. That is  
11 specifically prohibited by NRC regulations which reserves that  
12 authority to the Office of General Counsel.

13 And, finally, what Mr. Goldberg seems to be saying  
14 is because of the bureaucracy, because of OIA, because of OGC  
15 are Commission level offices they are not part of the NRC  
16 staff and they have nothing to do with this hearing.

17 The fact is that the agency is frightening or  
18 intimidating a witness that appears before the Board. I think  
19 that is the Board's responsibility. And in this context I  
20 think it can't be seen as anything other than an attempt to  
21 gag the witness, that is not have him testify.

22 What has been unstated and only hinted at is  
23 there is currently, as I understand from newspaper accounts,  
24 and I also understand from Mr. Moseley's concern about  
25 testifying in this proceeding, there is currently a Grand

Sim 3-4

1 Jury investigation going on about the very matters before this  
2 Board, that is whether NRC employees properly investigated  
3 reporting failures during the accident.

4 I think under that circumstance the agency's  
5 concern about the matter is understandable, but I think we  
6 have to realize what is at stake.

7 JUDGE SMITH: Okay. Now to back up, with reference  
8 to your statement that you believe that he believes that  
9 there is an express investigation going on, I don't believe  
10 that he believes that, or otherwise he would have said so.

11 Nevertheless, at your request, I will make an  
12 inquiry of the General Counsel to see if they are conducting  
13 an investigation of Mr. Gamble vis-a-vis the Ethics in  
14 Government Act.

15 But you have to understand that as of yesterday  
16 Mr. Gamble did put the matter into the lap of the General  
17 Counsel, but I will find out what the circumstances were  
18 with respect to any action of their own.

19 No. 2, with respect to what he may have inferred  
20 from Mr. Goldberg, whatever he may have inferred from  
21 Mr. Goldberg's remarks is past history. Mr. Goldberg has  
22 explained his remarks today. So let's move on from there.

23 Second, the intimidating effect that you infer  
24 from my remarks about the nature of his testimony, I don't  
25 now how any more we can assure him that we don't have any

Sim 3-5

1 pejorative views as to him coming forward with information  
2 he believes is in the public interest. We have done that.

3 I do believe, however, that Mr. Gamble's letter  
4 to the General Counsel does suggest to me that he does not  
5 have a sharp focus on the issues that we are trying to give  
6 relevant information on. But I will come back to that in a  
7 little bit.

8 With respect to this Board's responsibilities, I  
9 agree that we do have a responsibility to exercise our authority  
10 as much as we can to assure an accurate and complete record,  
11 and let's review what we have done.

12 We have issued a subpoena. I signed a subpoena,  
13 you know, that he should come here. I used the full power  
14 that we have to bring him here. So not much could be done  
15 more than that.

16 Not only that, but I have discussed with you  
17 areas in which on my own identification I believed could be  
18 argued by you as being relevant to the issues here and have  
19 indicated a willingness to listen to you further on these  
20 issues.

21 Second, with respect to the intimidating effect  
22 that may be imputed to Mr. Gamble on our rulings on  
23 Mr. Bradford and Dr. Gilinsky, I think you will recall that  
24 right at the outset we stated that, one, we are not interested  
25 in enforcing the criminal statutes of the Ethics in Government

Sim 3-6

1 Act. This is not our concern. We are concerned about a  
2 fair and reliable hearing.

3 And, indeed, with respect to Commissioner  
4 Gilinsky, we made available the forum for the discussion of  
5 relevant information that he may possess, relevant factual  
6 information which he may possess and made it clear that if  
7 that information would be identified and if it were relevant  
8 that we would want to hear about it.

9 The same way with Mr. Gamble. We have not  
10 suggested to him nor are we aware of anybody suggesting to  
11 him that he would be subject to criminal penalties. In fact,  
12 although you have observed that it is the General Counsel  
13 of the Commission who is the person who has the legal  
14 responsibility to determine where the Ethics in Government  
15 Act is concerned.

16 As we have also observed, it is our responsibility  
17 to determine with respect to the tenor of the Ethics in  
18 Government Act, the spirit of the Ethics in Government Act  
19 whether it is an effort to just use status alone to influence  
20 the record, and as a question of fairness that would be within  
21 our purview as to whether the tenor of it with respect to  
22 that area was being satisfied.

23 It would be my view, notwithstanding the fact  
24 that the General Counsel has the responsibility to determine  
25 who violates the Commission's regulations in that respect,

Sim 3-7

1 it would be my view, and we discussed it with the Board members,  
2 that if he has relevant factual information to give this  
3 Board, and we have outlined several areas where it touched  
4 upon it, that it would not be a violation of the Ethics in  
5 Government Act and the closest he would come to it would be  
6 to give expert opinion and we have been talking here about  
7 specific factual information.

8 I just don't know what else we can do to clarify  
9 that we are prepared to proceed to hear from him so long as  
10 we can have an identification and agreement that his testimony  
11 is relevant and competent.

end Sim  
Joe Fols

4-1-Wal

1 MS. BERNABEI: It seems to me what else the  
2 Board can do, to answer you Judge Smith, is to have the  
3 other portions of the Agency stop what he considers  
4 harassment, and I think one of the ways you can do that  
5 is making your ruling very clear that the Ethics in Government  
6 Act doesn't apply, and finding out what the Office of  
7 General Counsel is doing, what its purpose is --

8 JUDGE SMITH: We will do that.

9 MS. BERNABEI: -- and provide some assurances to  
10 him that the criminal portions of the statute are not going  
11 to apply to him.

12 JUDGE SMITH: We don't have to do that, he has  
13 already made that request on his own, so he has appropriately  
14 requested the General Counsel to give him advice on that,  
15 but I will also, however, find out, which I think is just  
16 a misconception on his part, that there is a formal, or  
17 informal, or any type of investigation into his activities.  
18 I don't know -- I mean I would think that if the General  
19 Counsel, if they knew that he had written testimony filed  
20 in this case and was planning to testify, and that we were  
21 about ready to hear him, that if there had been a formal  
22 investigation into whether that is a criminal act, we would  
23 know about it.

24 I think they would tell us about it.

25 MS. BERNABEI: Well, I would hope so, but



4-2-Wal

1       apparently that is not the case, and I don't know the  
2       circumstances, but I know Mr. Gamble well enough to know he  
3       would not make a representation such as this in his letter  
4       without some knowledge in fact that was the case.

5                JUDGE SMITH: I think it is an inference that  
6       he may have drawn from the entire aura of discussion.

7                MR. McBRIDGE: Judge Smith?

8                        (Board confers)

9                JUDGE SMITH: Excuse me. Judge Wolfe asks that  
10       we point out in the letter where he says that he is the  
11       object of investigation.

12               I inferred that inference, too, but I can't at  
13       the moment, find it in the letter.

14               MS. BERNABEI: On page 3, let me read the two  
15       portions that I believe indicate that. The second full  
16       paragraph, beginning -- well, I will read it.

17               Pursuant to the subpoena, I appeared at the ASLB  
18       Hearing in Harrisburg, Pennsylvania on November 20, 1984.  
19       For various reasons, the date of my testimony has been  
20       postponed. I have not yet been notified of the date I am to  
21       return to testify. However, it has since come to my attention  
22       that NRC officials are considering whether I would violate  
23       the Federal Conflict of Interest statute by so testifying.

24               You can imagine my surprise upon hearing this.  
25       I can be cited for contempt if I fail to respond to the

1 NRC subpoena, yet it appears that if I do comply with the  
2 subpoena, the NRC may attempt to have me criminally  
3 prosecuted.

4 Then again, on page 4, the next to the last  
5 paragraph, it says, --

6 JUDGE SMITH: Okay.

7 MS. BERNABEI: -- despite my impression of in-  
8 applicability of these statutes, the prospect of the NRC's  
9 initiating criminal action sufficiently intimidates me that  
10 I do not wish to testify until and unless I receive an  
11 authoritative decision from the Office of General Counsel.

12 JUDGE SMITH: All right.

13 JUDGE WOLFE: I was struck by your use of the  
14 word, 'investigation.' That Mr. Gamble had used the  
15 word, 'investigation,' and that he felt harassed by  
16 some on-going investigation by someone within the Nuclear  
17 Regulatory Commission.

18 From what you point out to us, at page 3 of his  
19 letter of November 23rd to Hershhal Plain, I don't infer  
20 from that that he is speaking of an investigation at all.  
21 I infer from that that at most someone is considering whether  
22 or not he would be in violation of the Ethics in Government  
23 Act, but I don't understand and do not infer that there is  
24 an investigation.

25 I am just pointing that out to you.

1 JUDGE SMITH: In any event, I think it is clear  
2 that he is concerned.

3 MS. BERNABEI: Let me just state my understanding.  
4 I think he is talking here about the office of General  
5 Counsel's interpretation of the Ethics in Government Act,  
6 and initiating criminal action.

7 It is also my understanding from a reading of  
8 the Ethics in Government Act regulations, the NRC manual,  
9 that there is an investigation done by the Office of  
10 Inspector and Auditor in these circumstances, and subsequently  
11 there is a referral to the Office of General Counsel.

12 I would characterize it in the NRC manual as  
13 an investigation.

14 JUDGE SMITH: Just two other points. You have  
15 requested, and I have agreed, to communicate with the Office  
16 of General Counsel to see if they are investigating.

17 However, the correct office charged with any such  
18 responsibility as far as the factual investigation is  
19 concerned, would be the Office of Inspector and Auditor.  
20 Would you have me inquire of them, too?

21 MS. BERNABEI: Judge Smith, I have no further  
22 information other than what appears in Mr. Gamble's letter.  
23 His understanding is that the Office of General Counsel, which  
24 is looking into and inquiring --

25 JUDGE SMITH: As I say, I see no need of my own

1 to do it, because I don't think it is a fair inference that  
2 anyone is investigating him, particularly Mr. Goldberg's  
3 explanation.

4 But you seem to be concerned that it is impeding  
5 the appearance of your witness, and the correct way to do  
6 it to resolve your concern is to inquire both of the Office  
7 of General Counsel and the Office of Inspector and Auditor,  
8 which if you wish, I will do that.

9 MS. BERNABEI: Okay. We would appreciate that.

10 JUDGE SMITH: And then there is another matter that  
11 should, perhaps, be clarified. And that is, you requested  
12 and I issued a subpoena to Mr. Gamble, perhaps without full  
13 communication.

14 I inferred from the request for a subpoena that  
15 Mr. Gamble was not an involuntary witness, that he was a  
16 voluntary witness which you were sponsoring.

17 However, he is also a Federal employee, and that  
18 he wished, for the purpose of his own employment, to make it  
19 clear that he is appearing as an individual, and not as a  
20 Federal employee, because as you know, Federal employees do not  
21 have to be subpoenaed to Federal hearings.

22 So, I thought that he wanted the subpoena to make  
23 that distinction, because he did make it clear in his  
24 original letter that he is on his own.

25 Now, I seem to be hearing something a little bit

1 different from Mr. Gamble, and that is he does not regard  
2 himself as a witness sponsored by you. But as a witness who  
3 is willing to come before the Board if the Board orders him  
4 to and give relevant information.

5 That may change your litigative posture. I don't  
6 know, but I would like you to mull over that thought and see  
7 how it changes what you are doing here.

8 MS. BERNABEI: I guess I don't understand the  
9 distinction. All the witnesses we propose are not individuals  
10 retained by us. The two former commissioners, as well as  
11 Mr. Gamble, former NRC investigator, were NRC personnel with  
12 what we believe an understanding of relevant facts. They  
13 are not experts retained by us in any sense of the word.

14 Therefore, they are not a witness in the normal  
15 sense as the licensee or perhaps the Staff would offer a  
16 witness.

17 However, we are sponsoring the testimony in the  
18 sense that we believe the testimony they will give to you,  
19 if permitted, would tend to prove the point we are trying to  
20 make in this hearing. Therefore, I think we are sponsoring  
21 it in that sense. I don't understand, I guess, the distinction  
22 you appear to be making of a witness the Board must direct to  
23 appear, and one that is coming voluntarily.

24 JUDGE SMITH: The distinction that I see here is  
25 Mr. Gamble is not saying through you, to the Board

1 I have information here which you ought to know about, and I  
2 want you to hear from me on.

3 He seems to be saying here I am, if you want me  
4 come and get me.

5 I think there is a difference. He is not standing  
6 out there at the edge of the hearing saying: Say, Board, I  
7 have information I want you to hear about that I think the  
8 public interest requires that you hear.

9 He is saying: I will come if I am compelled to  
10 come.

11 MS. BERNABEI: I think that situation has been  
12 created because of the Staff and, unfortunately, the Board's  
13 comments as well. I think he was willing to come forward  
14 basically when I requested, after reading his memorandum,  
15 I requested that he appear. I said it appears to have  
16 relevant information about the inadequacy of the NRC  
17 investigation, and I would like you to come testify about  
18 that. He was willing to do that, along the lines of his  
19 experience with the NRC.

20 However, I think subsequent events have made  
21 him frightened to do that. So that is our position. We  
22 still sponsor his testimony in the sense that we believe it  
23 demonstrates the point we are trying to make.

24 JUDGE SMITH: So, you think that he has begun to  
25 put some distance between himself and you?

1 MS. BERNABEI: I think he is trying to protect  
2 himself from what he considers harassment.

3 JUDGE SMITH: All right. We still sometime,  
4 however, I would think before we -- just thinking this  
5 through -- we still have yet to have a discussion as to what  
6 aspects of his proposed testimony you believe would conform  
7 to our ruling as to specific factual relevance.

8 I am wondering just what should be our sequence  
9 of priorities, or should we resolve that first, or would it  
10 be beneficial to you to clear the air so that you can go back  
11 to him and have him feel freer to consult with you, or  
12 whatever.

13 I will listen to your guidance.

14 MS. BERNABEI: What we suggested, and I think the  
15 other parties are not in disagreement, was to have Mr. Gamble  
16 testify after Mr. Moseley, once a decision has been made if  
17 he were to testify. I don't know if he has made that decision,  
18 whether he feels free to testify on this matter. We thought  
19 at that point there would be better definition of the scope  
20 of his testimony.

21 So, I would suggest -- I am ready to go forward  
22 now as to the direct testimony he would -- the Board would  
23 allow him to offer. However, the general agreement or  
24 understanding was that he would appear in sequence after  
25 Mr. Moseley if he were to appear.

1 JUDGE SMITH: Yeah. But we still have the problem  
2 of a threshold showing.

3 MS. BERNABEI: I understand. We are ready to go  
4 forward at any time to discuss that.

5 JUDGE SMITH: All right. As soon as we have an  
6 opportunity for a break, I will go to the telephone, I will  
7 ask the Legal Counsel for our panel, Mr. Presterman, to  
8 communicate by telephone with the General Counsel and with the  
9 Office of Inspector and Auditor to determine whether they are  
10 conducting affirmatively, I guess, an investigation aside  
11 from the letter that Mr. Gamble sent, and then we can get  
12 a telephone response back and see what is happening.

13 MR. GOLDBERG: I have talked to Mr. Moseley over  
14 the holiday weekend, and Mr. Moseley has decided that he will  
15 appear and testify as originally was planned, and I think we  
16 will have to work out with TMIA and the other parties the  
17 date on which Mr. Moseley will appear, because while he is  
18 available all this week, he is not available the beginning  
19 of next week and I want to just make sure that there aren't  
20 any gaps between conclusion of the other testimony in this  
21 issue and Mr. Moseley's appearance.

22 So, I will try to work that out with TMIA and the  
23 other parties.

24 JUDGE SMITH: While we are on that subject, I



1 think we neglected to tell the parties that this room is  
2 not available the 4th, which is next Tuesday, and we either  
3 have to find another room or drop that day.

4 And because of some conflicts that I have, I would  
5 -- my preference would be to drop the day, but if it is largely  
6 disruptive to our schedule, we will consider finding another  
7 hearing room, which is not easy.

8 But let's come back to that later this evening.  
9 I don't ask you to be able to decide that right now.

10 Is there any other -- Mr. McBride, you wanted  
11 to be heard.

12 MR. McBRIDE: Yes, Judge Smith. I didn't want to  
13 disrupt this, but I did hope we could get to Mr. Chwastyk  
14 today, and I wanted to take up a couple of preliminary  
15 matters with respect to his testimony.

16 JUDGE SMITH: All right. Before we do that,  
17 is there any other preliminary business before we get to the  
18 witness?

19 MR. BLAKE: Yes. Last week I served proposed  
20 stipulations on a number of matters which were prompted  
21 by the November 13th prehearing conference, and by a letter  
22 from TMIA of the same date with regard to questionnaires.  
23 Ms. Bernabei yesterday provided me with her thoughts on our  
24 proposed stipulation, and I am reviewing those so we don't  
25 have the report back to the Board today. We will shortly.

1 And I hope they will resolve those subjects.

2 Second, TMIA last week suggested that we put  
3 -- make an exhibit in the proceeding a document which  
4 identified the arrivals at Three Mile Island, the days  
5 immediately after the accident.

6 I have taken that suggestion back to the Company  
7 and the document that TMIA has suggested. We have no  
8 objection to having it admitted for that purpose. I can't  
9 identify either an author of it, or exactly when the  
10 document was generated, but I have no better information.  
11 Apparently the Company has no better information than is  
12 reflected in that document.

13 So, I have no objection.

14 Third, TMIA proposed that portions of Mr. Creitz  
15 and Mr. Lentz depositions be received as exhibits, presumably  
16 for the purpose of saying that if they were called as witnesses  
17 they would testify as they did in their deposition on these  
18 subjects.

19 We have reviewed the extracts which they proposed,  
20 and have no objection to their being admitted for that  
21 purpose.

22 Third, we will serve I believe later today a  
23 notice to the Board and the parties regarding the references  
24 to Mr. Faust and Mr. McGovern's testimony of the subject that  
25 came up last week. And finally, we proposed with regard to

1 Mr. McGovern and Mr. Faust in references to their past  
2 testimony that portions of their depositions be admitted  
3 into evidence, and I don't have the position of the other  
4 parties yet, but that proposal is still on the table.

5 I have no other subjects, but at the end of the  
6 day today I would like to talk about schedule of witnesses.  
7 I think once we have completed with Mr. Chwastyk and see where  
8 we are at the end of the day today, I would really like to  
9 talk sincerely about where we are on the schedule, because  
10 I am beginning to run into some witness schedule problems.

11 MS. BERNABEI: May I respond to a few things Mr.  
12 Blake said. The Creitz and Lentz deposition portions, should  
13 we mark those as exhibits, or should we simply assume that  
14 they will be admitted, assuming no objection from the Staff.

15 JUDGE SMITH: Something has to be done  
16 affirmatively to get them into the record, either marked as  
17 an exhibit or bound into the transcript.

18 MS. BERNABEI: I was asking the Board's preference,  
19 if they should be marked as exhibits.

20 JUDGE SMITH: Well, depends upon how long they  
21 are.

22 MS. BERNABEI: I think they are about -- one is  
23 about ten pages, and the second is five pages.

24 JUDGE SMITH: My preference would be to see them  
25 bound into the transcript as a stipulation as to what they

1 would have testified had they come.

2 MS. BERNABEI: And they will be bound in at this  
3 point?

4 JUDGE SMITH: Well, whatever point -- if you have  
5 them today. Will you have them today?

6 MS. BERNABEI: We can, yes.

7 JUDGE SMITH: It doesn't matter when. It really  
8 doesn't matter. Let's don't say at this point. Let's keep  
9 our options open, and when they are available for that  
10 purpose, we will want to scan them, too, and then when it is  
11 agreed that they are put in then we will bind them in at that  
12 point.

13 MS. BERNABEI: The second point had to do with the  
14 references with regard to the McGovern and Faust -- I believe  
15 it is interviews as well as the depositions in this case.

16 I have discussed this with Mr. Blake yesterday. I  
17 have no problem as a general rule of any of the parties, if  
18 it is open to all the parties, drawing the Board's reference  
19 to certain portions of the depositions, even though they were  
20 not covered on examination of a witness.

21 I understand that to be an exception to the  
22 Board's ruling, but I believe with -- sort of a record of  
23 this magnitude, that that may be appropriate. I do have  
24 objections to the specific portions that he has referenced,  
25 which I can address once they are made available to the Board

1 and parties.

2           However, I do think that some procedure applicable  
3 to all the parties should be outlined, since I think this is  
4 something that comes up during the hearing --

5           JUDGE SMITH: I think you have identified a  
6 problem, but I don't know if we have a solution. One is  
7 that the simple reference to a Commission -- to a simple  
8 standard that a witness has to refer to it is not sufficient  
9 nor reliable.

10           You know, a witness could refer to it and not  
11 know anything about it. And not only that, that isn't the  
12 intent.

13           The intent is that no item of evidence be  
14 received unless the significance of it is known at the time  
15 it is received, and the purpose for which it is being received  
16 is known. And it doesn't matter how that comes about. If  
17 the witness testifies about it, and gets his perspective  
18 through that channel, fine. If he gets the perspective through  
19 arguments of counsel, timely made, fine.

20           But again, it is the objective that we are trying  
21 to achieve, and that is no item of information be received  
22 in the record and then be later used for purposes that no one  
23 had any forewarning about. It is simply a matter of  
24 due notice and opportunity to confront all items of  
25 evidence.

1 MS. BERNABEI: I think, therefore, if the Board's  
2 ruling stands, as essentially I understood at the beginning,  
3 then it would be inappropriate for any of the parties to bring  
4 to the Board's attention portions of interviews that either  
5 the witness is not here to sponsor, or that a witness has not  
6 been questioned on.

7 JUDGE SMITH: Well, I don't know. You are asking  
8 for what you might call an algorithm formula. You know,  
9 something that will always apply in every instance. Do you  
10 want to consult with counsel?

11 MS. BERNABEI: No. What -- I understood that was  
12 the Board's ruling. Mr. Blake's request is clearly in  
13 -- contrary to the Board's ruling. We would be asking for  
14 an exception. What I am recommending is that -- the Board's  
15 ruling as I understood at the beginning of the case, although  
16 the joint mailgram exhibits have been stipulated between the  
17 parties to be admitted, the Board will not allow the parties  
18 to reference in their findings, or will not consider any  
19 findings based on interviews to which the Board's attention  
20 has not been drawn, and I understood that to be drawn --

21 JUDGE SMITH: The Board and the parties. So  
22 the parties know what the information is offered for, and have  
23 a chance to appraise it.

24 MS. BERNABEI: I understand. What I am saying  
25 is that what Mr. Blake as I understand is proposing, is

1 something I personally do not oppose, and I think may be  
2 necessary as long as it is open to all the parties.

3 What he is proposing is a portions -- portions  
4 of interviews with Mr. Faust and Mr. Marshall -- Mr. McGovern,  
5 as well as portions of the depositions in this proceeding,  
6 he draw the Board's attention to. Not through questioning  
7 of any witness, but just draw the Board's attention to it.

8 And then be allowed to rely on it in his finding.  
9 That, to me, is not in accordance with the Board's ruling  
10 insofar as it is not related to a specific issue of  
11 questioning.

12 JUDGE SMITH: Specific issue of questioning?  
13 Witness questioning.

14 MS. BERNABEI: Right. My understanding was that  
15 we had to bring up the interviews, portions of interviews,  
16 or documents we wanted the Board to consider in the actual  
17 questioning of witnesses.

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End 4.  
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JUDGE SMITH: That is where I don't think that you have captured the purpose. It may or may not be that a live witness is present to explain or address a document, but if the document is otherwise competent and otherwise relevant then in that event you have to timely inform the parties and the Board of your intent to use it.

I don't know the examples you are giving us here, but apparently you are talking about Faust and McGovern. I don't know, apparently he is offering portions of their previous interviews or depositions which are internally probative without need for outside reference.

I don't know. I don't know how to come up with a rule that is going to achieve the objective. You just don't run up with a document and touch a witness with it and turn it into a magically competent document.

MS. BERNABEI: Okay. Let me explain what I think the problem is going to be in this case, because we will object, given the Board's outlines. We don't object as a general principle to this procedure. We do object, given the Board's ruling and the restrictions on us to introduction of these documents.

I asked Mr. Dieckamp specifically about the Faust interview and Marshall notes which indicated Mr. McGovern's recollection of the accident. Both of those documents were transcribed, both of those interviews took



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1 place prior to May 9th, the time Mr. Dieckamp sent his  
2 mailgram. That was intended for the purpose of indicating  
3 the information available, or in the regular course of  
4 business it would be available, to Mr. Dieckamp before he  
5 sent his mailgram. Both those documents indicated those  
6 gentlemen, Mr. McGovern and Mr. Faust, saw the pressure  
7 spike -- at least, in our interpretation -- saw it as real.  
8 I think Mr. Faust described it as shock waves, something of  
9 that sort.

10 Mr. Blake, from what I understand, is asking  
11 that the Board's attention be drawn to the McGovern and  
12 Faust interviews insofar as it indicated their understanding  
13 of the pressure spike at the time it occurred as an electri-  
14 cal malfunction, something of that sort. That's what those  
15 interviews are going to say.

16 That has absolutely nothing to do with my  
17 questioning of Mr. Dieckamp, because there is no indication  
18 that those interviews, that information was available to  
19 Mr. Dieckamp before May 9th when he sent his mailgram. The  
20 only thing I know, unless Mr. Blake has other information,  
21 is that he had those two interviews available for him.

22 We don't know about conversations Mr. Dieckamp  
23 may have had with Faust and McGovern. Those interviews,  
24 on their face, were not available because they were con-  
25 ducted afterwards.

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1 JUDGE SMITH: All right. So, you are objecting  
2 to them because they are hearsay documents, basically they  
3 are hearsay documents and --

4 MS. BERNABEI: That's correct.

5 JUDGE SMITH: -- really you are having questions  
6 about their reliability and no opportunity to question  
7 those gentlemen. But they have been stipulated.

8 So, now we have to refine it. I don't know.  
9 We will just have to look at the document.

10 MS. BERNABEI: All these --

11 MR. BLAKE: Can't we wait until I serve my piece  
12 of paper and then discuss it rather than Mr. Blake is going  
13 to characterize and Mr. Blake is going to --

14 MS. BERNABEI: I think that's what he said.

15 JUDGE SMITH: I think this discussion has  
16 served to focus in on the problem. One is, of all the  
17 evidentiary problems we may have as to any one piece of  
18 stipulated evidence, I don't know how we can make an umbrella  
19 ruling. We will just have to rest with the general objectives  
20 that we have outlined, and that is that we don't have any  
21 surprises.

22 With respect to the particular items, we will  
23 just have to take them in context. I don't think we can  
24 make an umbrella ruling that is going to cover every  
25 conceivable situation that might come up.

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MS. BERNABEI: No. What I was going to suggest, and I don't think Mr. Blake would be adverse to this, is some procedure where the parties in a timely manner could refer the Board and the other parties, if possible at the time of hearing and if not possible at some short period after the hearing, of relevant portions of the interviews.

I would not be adverse to that. From talking to Mr. Blake, I understand --

JUDGE SMITH: After the hearing?

MS. BERNABEI: Well, one week -- that's what we talked about.

JUDGE SMITH: That sort of takes the Board out of the area. It takes us out of participation. And that is hardly timely. That is hardly an opportunity for parties to confront and rebut and to explain.

MS. BERNABEI: Well, all I can say is that this is something that made sense to Mr. Blake and I. I don't know what the Staff's position would be on it.

But there is a massive number of documents, and I think we are just struggling with the fact that we may not in the heat of the hearing be able to draw your attention to every portion of every interview that we would like to rely on.

JUDGE SMITH: Well, that --

MS. BERNABEI: And that's what we were trying to

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do.

2 JUDGE SMITH: -- may be a problem. But there  
3 again I don't know how to make an umbrella ruling that you  
4 can, a week or so after the hearing and after we are no  
5 longer able to control events -- not that we seem to be  
6 controlling them very well during the hearing --

7 (Laughter.)

8 But suddenly some other items are brought to  
9 our attention and we have no opportunity to address them,  
10 question them, or anything else, and I'm --

11 MR. GOLDBERG: Judge Smith --

12 JUDGE SMITH: I'm so concerned about the inter-  
13 minable arguments over things out of context, I really  
14 would rather wait until the actual item comes up, except  
15 that I do understand that your proposal right now really  
16 has to be addressed timely. It is a generic problem.

17 MS. BERNABEI: Yes. I'm just saying in terms  
18 of Mr. Blake's proposal about McGovern and Faust, it is  
19 going to be cropping up and --

20 JUDGE SMITH: In view of our stated concern that  
21 that seems to be a risky event, go back and discuss it some  
22 more and let us think about it, too, to see what can be  
23 done. What happens when in the speed of the hearing matters  
24 are overlooked, how do you get them in? I don't know.

25 You might -- we will discuss it later. Now --

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1 MS. BERNABEI: I have one more preliminary  
2 matter.

3 JUDGE SMITH: Do you? I really would like to  
4 get on with the witness.

5 MR. MC BRIDE: I'm really --

6 JUDGE SMITH: Be brief, and if it's lengthy we  
7 will have to come back.

8 MS. BERNABEI: This is very brief. This has to  
9 do with the order of the witnesses for the rest of the  
10 hearing which is why I wanted to bring it up now.

11 We would request that the NRC Staff provide a  
12 licensed operator in order to talk about the pressure chart  
13 and certain operator actions.

14 JUDGE SMITH: I'm sorry. I missed -- there was  
15 a phrase in there that I missed.

16 MS. BERNABEI: Yes. We would request that the  
17 NRC Staff produce as a witness, if possible, a licensed  
18 operator.

19 JUDGE SMITH: A licensed operator?

20 MS. BERNABEI: Yes, a commercial licensed opera-  
21 tor from the Staff. Now, maybe no one -- there is none.  
22 But someone to testify as to the pressure chart and how the  
23 pressure chart would be interpreted and what kind of actions  
24 the licensed operator would take during an accident.

25 We have heard testimony from Mr. Lowe, one,

#5-7-SueT

1 concerning what he thought licensed operators would do,  
2 even though he is not one. We have also heard Mr. Dieckamp's  
3 testimony concerning the physical nature of the pressure  
4 chart; that is, he believes that physically it could not  
5 have been removed on the evening of March 28th.

6 I think someone who understands the recorder  
7 could speak about that.

8 Secondly -- thirdly, about the actual shape and  
9 timing of the pressure spike and how one would interpret  
10 that. We heard testimony from Mr. Lowe as to that. We  
11 certainly are going to hear some testimony from site  
12 personnel.

13 But I think someone objective from the Staff  
14 could testify to that as well. And I think it would be  
15 instructive to the Board to have someone outside the Company  
16 talk about that.

17 JUDGE SMITH: Can't we keep these arguments --  
18 we are stating them two and three times longer than they  
19 have to be discussed. In the meantime, this man has a  
20 business that he wants to get back to.

21 And operators are only licensed to a facility.  
22 There is no -- there are no licensed operators on the Staff,  
23 are there?

24 MR. GOLDBERG: I don't believe there are. I  
25 think their licenses expire after two years, and there has

#5-8-SueT 1

2 to be a need for the license before it's renewed. I just  
3 don't believe we have any people who would comply with the  
4 requirements that Ms. Bernabei has suggested.

5 JUDGE SMITH: Is this the first you have raised  
6 it? Did you discuss it with Mr. Goldberg before you --

7 MS. BERNABEI: No, I haven't.

8 JUDGE SMITH: Well, really it would be helpful  
9 if in this type of thing first if you make at least an  
10 effort, even if you are pessimistic, to discuss with him  
11 before you take hearing time --

12 MS. BERNABEI: Okay. Fine.

13 JUDGE SMITH: Now, he knows what you want and  
14 the parties know what you want, and it's your responsibility  
15 to bring it back to the attention of the Board if you can't  
16 work it out off the record informally, okay.

17 MS. BERNABEI: Yes.

18 JUDGE SMITH: Now, Mr. McBride.

19 MR. MC BRIDE: Thank you, Judge Smith. I wanted  
20 to just make sure the record reflects the witness' compliance  
21 with the Orders the Board issued to him last Wednesday.  
22 And for that purpose, I wanted to ask him two questions.

23 JUDGE SMITH: Okay.

24 Whereupon,

25 JOSEPH CHWASTYK

was recalled to the witness stand and, having previously

#5-9-SueT

1 been duly sworn, was further examined and testified as  
2 follows:

## 3 DIRECT EXAMINATION

4 BY MR. MC BRIDE:

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5 Q Mr. Chwastyk, pursuant to the Board's Order to  
6 you which is reflected at Transcript 29,219, did you review  
7 your statements of May 21st, 1979, October 11th, 1979,  
8 October 30th, 1979 and September 4, 1980 after last  
9 Wednesday and before today?

10 A Yes, I did.

11 Q Since last Wednesday, have you spoken to or  
12 otherwise communicated with any other potential witness in  
13 this proceeding?

14 A No, I haven't.

15 MR. MC BRIDE: Judge Smith, at this time I  
16 would like to ask of the Board whether the sequestration  
17 Order that was put into place last Wednesday is now dis-  
18 solved, because I have not been served with any motion by  
19 TMIA.

20 JUDGE SMITH: It's our intention to dissolve  
21 the sequestration Order unless we are enjoined or stayed  
22 by the Appeal Board, and I have no information that we  
23 have been or that there was an appeal.

24 Is that correct?

25 MS. BERNABEI: That's correct. We are not going



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to appeal.

2 JUDGE SMITH: All right. The Order that was  
3 previously entered is dissolved.

4 MR. MC BRIDE: Thank you. Now, Judge Smith,  
5 I have a motion to make. And I have discussed this matter  
6 with Mr. Goldberg, and he knows that this is not in any way  
7 directed to him as any sort of personal attack.

8 But I have been profoundly disturbed since last  
9 Wednesday on behalf of my clients that the word "credibility"  
10 is being thrown around in these proceedings with respect  
11 to various witnesses, factual witnesses, expert witnesses,  
12 and I fear that it is going to continue and continue and  
13 continue unless the Board puts a stop to it.

14 These matters have been on television and on the  
15 radio. Friends of Mr. Chwastyk have seen him on television.  
16 And as you observed last Wednesday, this is a small com-  
17 munity. And I think that the word "credibility" can be  
18 misconstrued in a way that is extraordinarily harmful to a  
19 person's reputation.

20 After last Wednesday, I went back to Black's  
21 Law Dictionary to get out the definition. And the word  
22 "credibility" carries with it an attack on a person's  
23 veracity. Now, Mr. Goldberg represented on the record that  
24 he did not intend any such attack, and I understand that  
25 and I believe that.

#5-11-SueT

1 But the problem is that the word can be mis-  
2 construed, it has been misconstrued by the media, and I'm  
3 afraid will continue to be misconstrued unless counsel are  
4 directed now for the remainder of these hearings, all  
5 counsel, that they are not to characterize in any fashion  
6 until their proposed findings and briefs the credibility of  
7 any witness. I think they can speak about the accuracy of  
8 their testimony, the reliability of their testimony, but  
9 I would -- I really would not only ask but beg the Board  
10 to direct all counsel not to characterize the credibility  
11 of any witness.

12 JUDGE SMITH: Does anyone want to be heard on  
13 that?

14 MR. GOLDBERG: I just have a brief remark. Mr.  
15 McBride and I did discuss this. And, as he has indicated  
16 there was nothing personal intended in my line of question-  
17 ing nor my response to Board questions as to the purpose  
18 of my examination of Mr. Chwastyk. As a matter of fact,  
19 Mr. McBride and I discussed this with Mr. Chwastyk this  
20 morning.

21 We have agreed that an appropriate issue is the  
22 accuracy of a witness' present recollection as to what he  
23 knew on March 28th. And that was the purpose of my line  
24 of inquiry and will be the purpose of further lines of  
25 inquiry with this witness and with other witnesses.

#5-12-SueT

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MS. BERNABEI: Let me -- may I make a comment?  
I think I would oppose Mr. McBride's motion. I have sympathy for the fact that it's a terrible thing to be a witness. Most of these people have been through this many times before. And certainly the common use of the word "credibility" implies truthfulness or veracity, as Mr. McBride suggests.

However, I think there become many occasions when counsel -- and it can be counsel for any party -- will use the word in order to indicate to the Board or proffer to the Board why a certain line of questioning is relevant. And I think that legal use of the term has to be available to counsel to explain what they are doing if the Board requires it. I think if there is any such ruling made, it would be a very cumbersome procedure in that it would require Bench conferences or things of that sort.

So, I would oppose it.

JUDGE SMITH: That was exactly my concern. As we indicated the other day, we do not take the word "credibility" to be a pejorative term, one that relates to the truthfulness or veracity of the witness' testimony, but in the context of the way it has been used in this hearing as to his memory, as to his ability to remember the events which certainly has no disparaging intent at all.

I think we should leave it at rest here, that the

#5-13-SueT 1

2 word "credibility" is commonly misunderstood, it is a word  
3 that is easily captured in a short news story, in a TV  
4 roundup, and it can do damage. Certainly we should avoid  
5 it.

6 If we have to use the term to justify a continuing  
7 line of questioning, let's say let's first approach the  
8 Bench on it and see if it has to be done. But we do  
9 recognize that a person's ability to remember the facts is  
10 a legitimate issue and that is a sub-issue under credibility  
11 and we will have to deal with it.

12 Would that be satisfactory?

13 MR. MC BRIDE: Yes.

14 MR. GOLDBERG: Yes.

15 MR. MC BRIDE: I have nothing further, Judge  
16 Smith. One thing I should tell you, one of my colleagues  
17 was in touch with Mr. Mehler this morning. My understanding  
18 is -- I may stand corrected, but my understanding is that  
19 he is the next witness. My guess was that Mr. Chwastyk was  
20 going to consume most of today.

21 But I will call Mr. Mehler at some point during  
22 the day if it appears that we may be getting to him sooner.  
23 And I just wanted to have some understanding if anybody  
24 thinks we need to get to him today we need to apprise him  
25 so he can be over here so as not to give you any dead  
time.

#5-14-SueT 1

JUDGE SMITH: Are we ready to proceed with our examination?

2

3

Incidentally, how much time do we owe you? How long did it take you to review those?

4

5

WITNESS CHWASTYK: One day.

6

JUDGE SMITH: One day. Okay. Mr. Goldberg.

7

8

MR. GOLDBERG: When we ended on Wednesday, I had asked Mr. Chwastyk several questions about the extent to which he related to the NRC on May 21st, 1979 his interpretation of the pressure spike in terms of core damage. And we got into a discussion as to whether the phrase "core damage" was used in that interview.

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Mr. McBride and I have reviewed the transcript of that interview, and we have agreed certainly that the phrase "core damage" does appear in that interview, and I believe it's on Page 18 of that interview.

14

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I had asked a number of questions of Mr. Chwastyk as to whether he related to the NRC his interpretation of the pressure spike in terms of core damage. That was the line of inquiry that I was pursuing. I don't believe it's necessary to ask any further questions along that line as to the May 21st, 1979 interview, but the record should be clear that in fact in response to one question Mr. Chwastyk did use the phrase "core damage" and that is consistent with the testimony that he gave on Wednesday, that he

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#5-15-SueT

1 believed that prior to the pressure spike there was some  
2 core damage. So, in that respect his testimony on  
3 Wednesday and what he told the NRC on May 21st, 1979 was  
4 consistent about his belief that there was some core damage  
5 prior to and at the time of the pressure spike.

6 The further questions that I asked, which I no  
7 longer need to pursue because I think the record is clear,  
8 is whether he had further related to the NRC his interpre-  
9 tation of the pressure spike in terms of core damage. And  
10 on that matter, the transcript speaks for itself as does  
11 the -- that interview as well as the transcript of  
12 Wednesday's hearing.

## CROSS EXAMINATION

BY MR. GOLDBERG: (Continuing)

13  
14  
15 Q Mr. Chwastyk, on Wednesday you testified that  
16 at the time that you observed the pressure spike on the  
17 recorder your immediate reaction was that you didn't know  
18 what was happening.

19 Can you recollect now how long after you observed  
20 that pressure spike you concluded on March 28th that it was  
21 a real pressure spike?

22 A It's very difficult to put things together in  
23 terms of time for March 28th. March 28th was an awful long  
24 day for everybody that was involved down there.

25 So I would say -- and this is just a guess on my

INDEXXX

#5-16-SueT 1 part -- it was a few minutes after we had secured the  
2 equipment that started as a result of the high pressure  
3 in the building.

4 Q When you say you concluded that the pressure  
5 spike was real, could you describe to us what you mean  
6 by the conclusion that it was a real pressure spike?

7 A My conclusion that it was a real pressure spike  
8 was based primarily on the fact that we had our reactor  
9 building spray pumps and our reactor building spray valves  
10 had opened and we were in fact spraying down the reactor  
11 building. And my knowledge that to have that occur we  
12 needed two out of three coincidence circuitry on reactor  
13 building pressure to start those pumps and actually spray  
14 down the reactor building.

15 Q Yes. I understand that. What I'm trying to  
16 understand is what you mean by a real pressure spike as  
17 opposed to maybe a non-real or --

18 A Well, when I say real it was in terms of  
19 some of the discussions that were taking place at the  
20 time in terms of instrument failures or electrical mal-  
21 functions, that type of thing.

22 By real, I meant it had nothing to do with  
23 those examples. It was, in fact, a pressure increase  
24 in the reactor building.

25 An increase, pressure increase in the reactor  
building.

Sim 6-1

1 Q Now you testified that shortly after the occurrence  
2 of the spike you went and spoke to Mr. Gary Miller, and  
3 that that was approximately 10 minutes prior to his leaving  
4 for the Lt. Governor's office.

5 Can you describe what Mr. Miller's concerns were  
6 at the time that you were reporting to him the occurrence  
7 of the pressure spike?

8 MS. BERNABEI: Objection. No foundation.

9 MR. BLAKE: Same objection with regard to any  
10 prior testimony by this individual that he spoke with  
11 Mr. Miller at approximately ten minutes before he left  
12 for the Governor's office.

13 BY MR. GOLDBERG:

14 Q Okay. Mr. Chwastyk, approximately how long  
15 after the pressure spike occurred was it before you went  
16 and spoke to Mr. Miller?

17 A I would say it was somewhere between five and  
18 ten minutes after the pressure spike.

19 Q And at that time you reported to Mr. Miller  
20 the occurrence of the pressure spike?

21 A Yes, I did.

22 Q And I believe you testified that there was  
23 a moving conversation that occurred at the time that you  
24 informed him of the pressure spike?

25 A Yes, I did.



Sim 6-2

1 Q And that moving conversation began in the shift  
2 supervisor's office and proceeded in and around the control  
3 room?

4 A That is correct.

5 Q What kinds of things was Mr. Miller looking at  
6 during that moving conversation?

7 A Well, he was looking at a number of parameters  
8 on the plant. I remember specifically he looked at the  
9 secondary plant in the area of what would be the right  
10 console of that exhibit we had last week, and I also remember  
11 him looking in the area of the reactor building pressure  
12 recorder on the left console. I can't say exactly what he  
13 was looking at.

14 Q Do you know the purpose for which he was looking  
15 at these various items?

16 A I have the impessure that I thought it was  
17 twofold. I thought that he was preparing himself for his  
18 forthcoming meeting with the Lt. Governor and I think it  
19 was also to verify the fact that we did see a pressure  
20 increase in the reactor building.

21 Q Now I believe you testified that you don't  
22 recall whether you mentioned to Mr. Miller hydrogen being  
23 the cause of the pressure spike; is that correct?

24 A That is correct.

25 Q And you don't recall that you mentioned to

Sim 6-3 1 Mr. Miller that there had been a burn or explosion; is that  
2 correct?

3 A That is correct.

4 Q And you don't believe that you used the words  
5 core damage when you discussed the cause of the pressure  
6 spike with Mr. Miller?

7 A I don't believe I did, but I may have. I don't  
8 recall it.

9 Q Now as best as you can recall, when you told  
10 Mr. Miller of the pressure spike, I believe that you testified  
11 that he said well, let's wait and see what happens, or some  
12 words to that effect. Am I correct in my recollection of  
13 that. Don't get excited and let's wait and see.

14 A I believe it was more in the terms of let's not  
15 get excited rather than let's wait and see.

16 Q Did Mr. Miller make any statements to you in  
17 response to your pointing out the occurrence of the pressure  
18 spike that he believed the pressure spike was caused by  
19 a hydrogen burn?

20 A No, not that I can recall.

21 Q Did Mr. Miller make any statements to you in  
22 response to your pointing out the occurrence of the pressure  
23 spike that he believed the pressure spike was indicative  
24 of core damage?

25 A No, not that I can recall.

Sim 6-4

1 Q Did Mr. Miller make any statements to you after  
2 you pointed out the occurrence of the pressure spike that  
3 he believed the pressure spike was real?

4 A Not that I can recall, no.

5 Q Now you also testified on Wednesday that at  
6 some point you came to conclude that hydrogen buildup was  
7 the cause of the pressure spike.

8 Could you explain what the basis was for your  
9 conclusion that hydrogen buildup was the cause of the  
10 pressure spike?

11 A The basis of my conclusion was that we had  
12 hydrogen in the reactor coolant system and the evolution  
13 in which we were operating at that time, which was venting  
14 the pressurizer to the reactor building, was a means of  
15 allowing the hydrogen an escape route, if you will, into the  
16 reactor building.

17 Q Is the occurrence of hydrogen in the cooling  
18 system a normal occurrence under the normal operation of the  
19 plant?

20 A There is a means of under irradiation where water  
21 will -- I forget the right terms for this. I haven't been  
22 involved with the business for a while, but there is a means  
23 by which water will be divided into its constituent parts  
24 of hydrogen and oxygen and there is also under either a  
25 neutron or a gamma flux, I am not sure which, and the opposite

Sim 6-5

1 occurs -- well, I am not sure about that second part, but  
2 there is a way of creating hydrogen, if you will, out of water  
3 in a nuclear reactor.

4 Q And do you have any knowledge as to the quantities  
5 of hydrogen that are generated by that process that you  
6 just described?

7 A Now?

8 Q Yes.

9 A No.

10 Q Do you know whether you received any formal  
11 training concerning the extent of hydrogen buildup in reactors  
12 under normal operation?

13 A Yes, I am sure I did.

14 Q Do you know whether your training included the  
15 buildup of hydrogen under accident scenarios?

16 A I am not sure that it included the buildup of  
17 hydrogen. Of course, it didn't include the fact that you  
18 would get hydrogen.

19 Q Do you recall whether your training discussed the  
20 extent of hydrogen buildup due to a large break loss-of-  
21 coolant accidents?

22 A I don't know that I can answer that. You are  
23 asking me very specific questions on hydrogen in training  
24 programs. I can say that we had training on zirc water  
25 reaction and we had training on the hydrogen association

Sim 6-6

1 and disassociation.

2 Now whether it is specific, you know, to a loss-  
3 of-coolant accident or if it was specific to a steam break  
4 or whatever it may be, I don't know that I can answer.

5 Q You testified on Wednesday that there were  
6 possibly three instructions on March 28th, 1979 not to operate  
7 equipment in the reactor building, and I believe you testified  
8 that the first one, as best as you can recall, was shortly  
9 after the pressure spike; is that correct?

10 A That is correct.

11 Q Do you know how long after the pressure spike  
12 you believe that first order not to operate equipment was  
13 given?

14 A I can only say that the time period in which  
15 I talked to Mr. Miller and then walked out into the control  
16 room. Now whether that is a minute or, you know, 90 seconds,  
17 or five minutes, I don't know that I can say specifically.

18 Q It was during that same moving conversation that  
19 he either gave or approved an order not to operate equipment?

20 A It was during that conversation, yes.

21 MR. BLAKE: Mr. Goldberg, could you repeat that  
22 question?

23 MR. GOLDBERG: I asked whether it was during  
24 the same moving conversation that he had earlier testified  
25 to that Mr. Miller either gave or approved an order not to

Sim 6-7

1 operate electrical equipment, and his answer was yes, he  
2 believed so.

3 MR. BLAKE: Thank you.

4 BY MR. GOLDBERG:

5 Q Now do you recall whether you had an indication  
6 from Mr. Miller that he was affirmatively giving or approving  
7 an order not to operate electrical equipment as opposed to  
8 an assumption that you might have made that he had approved  
9 an order not to operate electrical equipment?

10 MS. BERNABEI: Objection, vague. I don't think  
11 it is clear what the question is.

12 JUDGE SMITH: I don't understand it.

13 BY MR. GOLDBERG:

14 Q What did Mr. Miller say or do that led you to  
15 believe that he was affirmatively approving an order not to  
16 operate electrical equipment?

17 A I suggested that we not operate the quipment  
18 based on my discussion with him in terms of the operating  
19 of the valves simultaneously with the spike in the pressure  
20 and he agreed with that.

21 Q Mr. Chwastyk, I would like to refer you to your  
22 September 25th, 1984 deposition in this proceeding, on page  
23 76 and pages 86 to 87.

24 (Pause.)

25 MS. BERNABEI: Does the Board have a copy?

Sim 6-8

1 JUDGE SMITH: Yes, thank you.

2 MR. McBRIDE: I want to apologize to the Board.  
3 I brought a large stack with me this morning, but I neglected  
4 to bring our copy of that deposition transcript. So if any  
5 party has an extra copy, we would appreciate it.

6 MS. BERNABEI: We do if you would like one.

7 BY MR. GOLDBERG:

8 Q Mr. Chwastyk, again just to repeat the question,  
9 would you please refer to page 76 of that deposition, and  
10 the last question and answer on that page, and then also to  
11 pages 86 to 87, at the bottom of 86 through the top five lines  
12 on page 87 and tell me whether that refreshes your  
13 recollection as to whether you had just made an assumption  
14 that Mr. Miller had approved such an order or whether there  
15 was some indication from Mr. Miller that he in fact affirma-  
16 tively approved such an order?

17 A You know, maybe I could straighten this out a  
18 little bit without having to bother to read all of this.

19 When I gave this testimony it was based on what  
20 I remembered at the time it was given without any reading  
21 or discussion about the incidents that occurred then.

22 Since then on directions of this panel I have  
23 reviewed my previous testimony and as a result of that I  
24 have a better recollection now of some of those things that  
25 have occurred on that date.

Sim 6-9

1 Q Okay. And I believe you indicated in your  
2 deposition there that you had made the assumption that  
3 Mr. Miller gave that order. Is it your testimony now that  
4 it was not an assumption but that in fact there was some  
5 indication from Mr. Miller that he indeed was approving an  
6 order not to start electrical equipment?

7 A When I gave that deposition, that was my  
8 recollection at the time. Since reviewing all of my deposi-  
9 tions, I recollect my discussion with Mr. Miller and my  
10 suggestion or statement to the effect that we should not  
11 operate equipment in the reactor building and I do recall  
12 his concurring with that.

13 JUDGE SMITH: Well, Mr. Chwastyk, this is the  
14 type of question that lawyers like to ask, and that is by  
15 reading those interviews and depositions over the weekend,  
16 is it as you sit here today that you remember the events  
17 better or that having seen the interviews you recognize  
18 that that may have been a better statement of what you  
19 remembered at that time?

20 Do you understand that question?

21 THE WITNESS: Yes, I do, and I wish I could  
22 answer that they were a better recollection. But, unfortunately,  
23 in some instances my reading of these documents has sparked  
24 memories of things that occurred ---

25 JUDGE SMITH: At the time of the accident.



Sim 6-10

1 A --- at the time of the accident, yes.

2 JUDGE SMITH: Your memory today of events at  
3 the time of the accident?

4 THE WITNESS: Yes.

5 BY MR. GOLDBERG:

6 Q Do you recall whether the order not to start  
7 electrical equipment was given before or after the containment  
8 spray pumps were turned off?

9 A It was after.

10 Q It was after?

11 A Yes.

12 Q Do you recall how long after?

13 A It was a very short period of time afterwards.

14 Q Now you testified on Wednesday also concerning  
15 drawing a bubble on the afternoon of March 28th, and I  
16 believe you testified that you received permission from  
17 Mr. Miller to draw the bubble; is that correct?

18 A That is correct.

19 Q As best as you can recall, how long after  
20 the occurrence of the pressure spike did you receive that  
21 permission?

22 A It was again a very short period of time after  
23 the pressure spike. I characterize that in a matter of  
24 minutes rather than, you know, tens of minutes or hours.

25 Q And this was also during that same moving

Sim 6-11

1 conversation?

2 A I don't really recall if it was in fact part of  
3 that conversation or if it was shortly thereafter.

4 Q Didn't Mr. Miller leave the site immediately  
5 after that moving conversation?

6 A We did have the conversation and when the  
7 conversation was completed he walked out of the control room.  
8 So I would have to say that he did not leave immediately after  
9 the conversation.

10 Q So I guess then after that moving conversation  
11 that you testified about and prior to Mr. Miller's leaving  
12 the site you had another conversation with Mr. Miller?

13 A I don't recall again whether or not I received  
14 permission to draw the bubble as part of this one continuous  
15 conversation or if there was a break in between, or if it was  
16 not, you know, one continuous conversation with a break  
17 in between, if that is clear.

18 Q What are the steps that you followed to draw  
19 the bubble?

20 A The steps were that we closed either the block --  
21 I guess the block valve for the electromagnetic relief valve  
22 and we turned on the pressurizer heaters and we increased  
23 our makeup flow or high-pressure injection flow, however  
24 you want to ---

25 Q Do you recall the order in which you did those

Sim 6-12

1 things?

2 A Of the three I know that we closed the block valve  
3 and then turned on the heaters. Now exactly where increase  
4 in the makeup flow occurred in that order of sequences, I  
5 don't recall.

end Sim

*Joe Sue* fols

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1 Q Now, as best you can recall today, what time did  
2 you actually begin these three steps?

3 A I think it was shortly after two o'clock in the  
4 afternoon.

5 Q And at what time was the block valve closed?

6 A Somewhere in that sequence. I can't recall  
7 exactly the time in terms of time.

8 Q Do you believe the block valve was closed about  
9 two o'clock on the afternoon of March 28th?

10 A It was shortly after two o'clock. I don't know  
11 how long after. I really don't know.

12 Q Could it have been after three o'clock on March  
13 28th?

14 A It is possible. If it was after three, it would  
15 only be contributable to our check out of pressurizer heaters.

16 Q Is that something that could have taken approximately  
17 an hour?

18 A At that time, under those conditions, possibly.

19 Q Is there a difference in your mind between drawing  
20 a bubble and repressurization?

21 A They are two different terms. And they have  
22 different meanings.

23 I guess I don't understand the question.

24 Q Is closing the block valve in and of itself  
25 sufficient to establish repressurization?

1 A Not normally, no.

2 Q Is it in and of itself sufficient to draw a  
3 bubble?

4 A No.

5 Q You testified also about your radio communications  
6 with Mr. Herbein. And I believe you testified you don't  
7 recall exactly when that radio communication was established.  
8 Am I correct in that?

9 A That is correct.

10 Q Could it have been late afternoon or evening on  
11 March 28th?

12 A Yes, it could have.

13 Q Do you recall whether you told Mr. Herbein about  
14 the occurrence of the pressure spike?

15 A I don't believe I told Mr. Herbein anything about  
16 the occurrence of the pressure spike. Assuming now, this is  
17 on the radio. Or at any time, it doesn't matter.

18 Q Do you recall whether you discussed hydrogen  
19 buildup with Mr. Herbein?

20 A No, I did not.

21 Q You don't recall, or you did not discuss hydrogen  
22 buildup.

23 A I don't recall.

24 Q You testified on Wednesday also about your belief  
25 that there was core damage at the time -- prior to and at the

1 time of the pressure spike, and that the pressure spike to you  
2 meant that core damage was continuing, is that a fair  
3 characterization of your testimony?

4 A No, not at all. I don't think I said anything near  
5 that.

6 Q Okay, would you explain please what your prior  
7 testimony was on the existence of core damage -- your belief  
8 as to the existence of core damage just prior to the occurrence  
9 of the pressure spike, and your belief as to whether or not  
10 the pressure spike indicated the continuing nature of the  
11 core damage?

12 A My previous testimony and my thoughts on that  
13 subject right now are pretty much the same, I believe, and  
14 that was when I arrived in the control room there was  
15 discussion on core damage. We had indications -- other  
16 indications that indicate we did, in fact, have some core  
17 damage.

18 These discussions included opinions of relative  
19 how much core damage there was. My opinion was that we  
20 apparently had suffered some core damage at the -- when the  
21 reactor building pressure increased, and I was able to put  
22 together my conclusion at the time that it was due to a  
23 hydrogen burn led me to believe that my previous understanding  
24 of how much core damage was incorrect. It also led me to some  
25 concern that in a way we were operating on whether or not the

1 core damage was, in fact, still continuing or on-going.

2 Q And I believe you testified that you were using  
3 the phrase, 'core damage' in that testimony as to your  
4 belief as to what existed on March 28th, in terms of the  
5 perforation of the fuel cladding, am I correct in that?

6 A That is correct.

7 Q Did you believe at the time of the occurrence  
8 of the pressure spike that the core was uncovered?

9 A I believe that I didn't know whether or not the  
10 core was covered or uncovered.

11 Q Did you take any actions to determine whether or  
12 not the core was uncovered?

13 A I took actions to assure the core was covered.

14 Q And exactly what were those actions?

15 A That was increasing high pressure injection flow,  
16 shutting the block valve, and turning the pressurizer heaters  
17 on, and heating the pressurizer up and forcing the water from  
18 the pressurizer to the reactor coolant system.

19 Q When you took those actions, did you discuss  
20 with anyone that you were taking those actions in part because  
21 of your desire to assure that the core was not uncovered?

22 A Could you repeat that question? I am not sure  
23 I understand.

24 JUDGE SMITH: Before you repeat the question,  
25 I want to clarify what we understood his last answer to have

1 said.

2 We understand you to say that one of the steps  
3 that you would take to assure if the core is covered to  
4 increase the flow of water through the pressurizer into  
5 the reactor coolant system?

6 WITNESS: No, no, I didn't say that. I said  
7 increase the flow of water to the reactor coolant system.

8 JUDGE SMITH: Somehow you have the pressurizer  
9 in there as one of the pathways,

10 We know what a pressurizer is, and what the  
11 heater is. It is just that the pathway was confusing to  
12 us. You have clarified it.

13 BY MR. GOLDBERG: (Continuing)

14 Q And what my subsequent question was, was whether  
15 at the time you took those actions, you expressed to anyone  
16 that the reason in part at least in taking those actions  
17 was your concern that the core might be uncovered?

18 A I don't recall any discussion of the core being  
19 uncovered. I do recall my making a statement to the effect  
20 that we are moving in a positive direction.

21 That was just to clarify that somewhat. That  
22 was my means of showing my elation, that in fact, we were  
23 taking some positive steps that I agreed with and thought  
24 we should be taking, and that was just a general comment  
25 I think to an operator or two that were in the console.



1 MR. GOLDBERG: Thank you, Mr. Chwastyk. I don't  
2 have any further questions at this time.

3 JUDGE SMITH: We are going to change the sequence  
4 that has been followed earlier and hereafter, if we remember  
5 to follow the sequence.

6 The Board questions will come after the other  
7 parties have completed a round of questioning.

8 MR. McBRIDE: Judge Smith, could we take a short  
9 break?

10 JUDGE SMITH: Let's go off the record.

11 (Off the record discussion ensues)

12 JUDGE SMITH: Back on the record. Mr. Blake?

13 CROSS EXAMINATION

14 BY MR. BLAKE:

15 Q Mr. Chwastyk, have you ever intentionally  
16 withheld any information regarding the pressure spike from  
17 the NRC or other authorities?

18 A No, I have not.

19 Q Are you aware that any of your fellow operating  
20 personnel or others at TMI, including Gary Miller or Jack  
21 Herbein, intentionally withheld any information regarding the  
22 pressure spike from the NRC or other authorities?

23 A What was the first part of that question.

24 Q Are you aware?

25 A No, I am not.

X INDEX

1 Q Do you believe that any of these individuals with  
2 whom you have worked would have withheld information or  
3 their understandings -- any understandings they had about  
4 the pressure spike from NRC or other authorities?

5 A No, I don't.

6 MS. BERNABEI: Excuse me. Could you just  
7 repeat the question.

8 BY MR. BLAKE: (Continuing)

9 Q I don't know that I can repeat it verbatim, but  
10 I can come close for your purpose. Do you believe any of  
11 these individuals with whom you have worked would have  
12 withheld information or their understandings, and the  
13 understandings they had about the pressure spike, from the  
14 NRC or other authorities?

15 And the answer was, 'No.'

16 Are you aware that the TMI-2 accident has been the  
17 subject of a number of investigations?

18 A Yes, I am.

19 Q Are you aware that the pressure spike and its  
20 appreciation by you and others at TMI on the day of the  
21 accident have been studied? I will repeat it.

22 A Yes.

23 Q Are you aware that the pressure spike and its  
24 appreciation by operating personnel, you and others at TMI  
25 on that day, has been specifically studied?

1 A Yes, I am aware of that.

2 Q Have you read any of those reports?

3 A I have read some reports, but not very many. Of  
4 course, I have read my deposition. I seem to recall reading  
5 one, or part of one report. I don't remember the name of it.  
6 I don't know if it was the Rogovin or one of those reports.

7 If your question is on specifically on the  
8 hydrogen, I don't recall specifically any one.

9 MS. BERNABEI: Can I just ask the relevance of  
10 this line of questioning? The Board is here to make a  
11 de nova determination and we all know there are many reports  
12 and investigations, but as the Appeal Board said, and Judge  
13 Smith you have noticed many times, you are here to see the  
14 witnesses and make your own determination.

15 Therefore, I certainly don't think this witness'  
16 familiarity as he described is going to be probative for the  
17 Board.

18 JUDGE SMITH: With these reports, I don't  
19 understand their relevance either.

20 MR. BLAKE: Do you have a question and answer --

21 JUDGE SMITH: There is a request that you explain  
22 the relevance of this line of questioning, and I agree that  
23 it is appropriate.

24 MR. BLAKE: My question is of Mr. Chwastyk, and  
25 my suggestion is going to be to him, that he review portions

1 of these reports and see what has been said about this subject  
2 matter, and what investigators have viewed his testimony in  
3 the past.

4 That is where I am headed, and I am one question  
5 away from it at this juncture. I think it is important that  
6 Mr. Chwastyk understand the significance of his testimony,  
7 and his views, and what has been said about it in the past.

8 MS. BERNABEI: I think this Board has made it  
9 very clear, I think specifically in reference to Mr. Gamble's  
10 testimony, it doesn't want to litigate the accuracy of all  
11 these other investigations.

12 MR. BLAKE: I agree with that.

13 MS. BERNABEI: And I think without doing that,  
14 to ask a witness who stated he is unfamiliar with these  
15 investigative findings, it is really just not going to be  
16 useful information. The Board doesn't want to do this. You  
17 want to make your own findings.

18 So, to ask a witness who is unfamiliar with  
19 these reports and findings to take a lunch break and review  
20 them and come back and comment on it is really not going to  
21 be relevant.

22 JUDGE SMITH: Did you want to comment further?

23 MR. BLAKE: No.

24 JUDGE SMITH: There is a subtle point that is  
25 going to be wrestled with by the Board, I guess. First, if

1 he is asking him to do that for the purpose of seeing if  
2 his memory is refreshed, then we have no problem. He can  
3 do that.

4 Now, I suspect that another purpose, however,  
5 will be to see that if reading these reports and seeing  
6 what others have said about the sub-issue, does that change  
7 his opinion that he has expressed during the testimony, that  
8 I think is still within the margin of acceptability, but  
9 it is getting close to the perimeter.

10 If his purpose is to bootstrap the report somehow  
11 into the witness, well then he is going to be in trouble.

12 Judge Linenberger points out that yet another  
13 purpose could be did he read anything in these reports that  
14 his memory tells him and us that the reports are inaccurate.

15 MS. BERNABEI: If I can just say, I think what this  
16 witness is providing, unless I misunderstood, is factual  
17 testimony, not his opinion.

18 He was there. This is his understanding from his  
19 personal knowledge understood others to believe, and as such  
20 is really not asking for an investigative finding, investi-  
21 gative opinion. I think it is a different nature of testimony  
22 than these reports.

23 JUDGE SMITH: I think we are going to have to  
24 wait until the actual question comes up. I think we have  
25 outlined the three or four areas where we might be looking

1 at it.

2 As a pure memory refresher, I don't think there  
3 is any problem if they could serve our purpose. It is the  
4 second two areas that we do have difficulty with.

5 All right. So you are asking him -- are you going  
6 to direct his attention to something in particular?

7 MR. BLAKE: Yes, and this was as far as I intended  
8 to go in the questioning before the break in order to give  
9 him an opportunity to review these portions, and I will  
10 identify them for the Board and the parties those portions  
11 of the reports which I had indicated.

12 End 7.  
13 SMT fols.

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1 In NUREG 0600, which is Joint Exhibit Number 62,  
2 Roman Numeral I-4-49; in the Special Inquiry Group Report,  
3 which is Joint Exhibit Number 106, Page 908 and 911; in  
4 the Senate Investigative Report, so-called Hart Report,  
5 which is Joint Exhibit Number 108, Page 139 and 140; in  
6 NUREG 0760, which is Item 142, Pages 23 and 24.

7 MS. BERNABEI: If I could make a similar request,  
8 if Mr. Blake is going to question him about certain investiga-  
9 tive reports I would request that Mr. Chwastyk review a  
10 portion of the report by the Majority Staff of the House  
11 Committee on Interior and Insular Affairs which is Exhibit  
12 143.

13 MR. BLAKE: What pages?

14 MS. BERNABEI: That would --

15 WITNESS CHWASTYK: Judge, this is going to be  
16 a long lunch.

17 JUDGE SMITH: Yes.

18 MS. BERNABEI: Let me just give the page  
19 numbers, specifically Pages 54 through 88.

20 JUDGE SMITH: 54 through 88?

21 MR. BLAKE: That may very well be a long lunch.  
22 I identified seven pages.

23 JUDGE SMITH: That's not reasonable. In fact,  
24 the whole exercise, both that attempted by Mr. Blake and  
25 yours does not impress me as a really productive endeavor.

#8-2-SueT

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MS. BERNABEI: I agree.

JUDGE SMITH: But yours simply is -- that's seven pages and you want what? I want to look at those pages before he is asked to read them.

MR. MC BRIDE: I was just going to say, I'm not objecting to this in the least, and I will be happy to help review these with him and point him to the specific points.

Do people want him to look at references to him or to other operators or just the whole thing? Because we can -- I can help him with this, but I just want to know what we are driving at here.

MR. BLAKE: Well, I'm confronted with the situation where I asked him several questions and then asked him whether or not he had read any kind of reports. He said he thought he had but he really couldn't recall or what, if any, possibly Rogovin.

What I want is to -- and I will be happy to tell the Board right now what questions I will ask him after he reviews these reports.

JUDGE SMITH: It might be helpful, because I just can't -- if his memory is genuinely refreshed that's one thing. It doesn't seem like that is going to happen a lot.

If your objective is for him to say: Oh, golly,



#8-3-SueT

1 Rogovin says this. He must be right, I must be wrong --

2 MR. BLAKE: No. That's not what -- Mr. Chwastyk  
3 has testified now over years, at least on four occasions and  
4 maybe been interviewed on others as well. I don't expect  
5 him to change his views today.

6 JUDGE SMITH: Then, what are you trying to  
7 accomplish?

8 MR. BLAKE: The only purpose is to have him look  
9 at those and see that even after looking at those reports  
10 that his prior answers to me today remain the same.

11 MS. BERNABEI: It just doesn't seem to me that  
12 that's the -- what he is asking him to do is look at other  
13 investigators' conclusions and then state: Do you still  
14 think factually what you said happened happened?

15 He can probably say that right now.

16 JUDGE SMITH: There has to be a mechanism by  
17 which you predict or you think that there is a reasonable  
18 possibility that his factual testimony will change, the  
19 only one I can think of is memory refresher and if that's  
20 your purpose, okay. That's fine. If you think some of  
21 the facts set out in those reports may tend to refresh  
22 his memory, that's legitimate.

23 If -- I think you had better narrow it. You  
24 had better narrow it to that as your purpose, because if

#8-4-SueT

1 your -- you are going to have to explain again. I've lost  
2 the thread of your plan.

3 WITNESS CHWASTYK: Mr. Blake --

4 JUDGE SMITH: You may want to consult with your  
5 counsel.

6 (The witness, Mr. Chwastyk, is consulting with  
7 his counsel, Mr. McBride.)

8 MR. GOLDBERG: While they are consulting, I would  
9 ask Mr. Blake whether on NUREG 0760 he is certain he has  
10 the right pages, because while there is some passing  
11 references on Pages 23 and 24 most of the matters that have  
12 been discussed here today are contained on Pages 26 and 27  
13 of NUREG 0760.

14 MS. BERNABEI: Well --

15 MR. BLAKE: Mr. Smith, this has become sufficiently  
16 confusing and enough intrigue somehow introduced here, none  
17 of which was intended, that I withdraw the suggestion that  
18 Mr. Chwastyk take a look at these reports and these pages.

19 JUDGE SMITH. I think that's a good idea. How  
20 about your request, Ms. Bernabei?

21 MS. BERNABEI: Yes. I withdraw that as well.

22 JUDGE SMITH: All right. So that has improved  
23 your lunch hour.

24 (Laughter.)

25 And that will begin now and end at 1.

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MR. BLAKE: All right.

JUDGE SMITH: One o'clock.

(Whereupon, the hearing is recessed for lunch at 11:59 a.m., to reconvene at 1:00 p.m., this same day.)

END #8  
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Sim 9-1

## AFTERNOON SESSION

(1:00 p.m.)

1  
2  
3 Whereupon,

4 JOSEPH CHWASTYK

5 resumed the stand and, having been previously duly sworn, was  
6 further examined and testified as follows:

7 JUDGE SMITH: Mr. Blake.

8 CROSS-EXAMINATION (resumed)

9 BY MR. BLAKE:

INDEX 10 Q Mr. Chwastyk, based on your knowledge, having  
11 been there on March 28 in the TMI control room and leaving  
12 yourself out of this for the moment, do you believe that  
13 anyone understood the significance of the pressure spike  
14 on March 28th, that day, in terms of core damage?

15 MS. BERNABEI: I am going to object for lack  
16 of foundation. That is a legal question before this Board and  
17 I think this is a fact witness. I mean I think unless there  
18 is some foundation laid to elicit factual testimony, that  
19 doesn't appear to be the case.

20 MR. BLAKE: Oh, goodness sakes, we have been here  
21 discussing now for days that people were in the control room  
22 and they had discussions with each other and have had  
23 discussions since.

24 JUDGE SMITH: Although it is one of the ultimate  
25 factual issues we have to decide, it is nevertheless a factual

Sim 9-2

1 matter as to which he can express an opinion, if he can  
2 express an opinion.

3 THE WITNESS: The only opinion I can give, and that  
4 is the people that I discussed the pressure spike with gave  
5 me the impression that they thought it was a serious incident,  
6 but other than that I don't know that I can speak any further  
7 on it.

8 BY MR. BLAKE:

9 Q And by those people are you describing Mr. Miller,  
10 Mr. Mehler and the NRC inspector with whom you spoke and the  
11 people whom you briefed in the oncoming crew late that  
12 afternoon?

13 A Well, I would exclude possibly Mr. Miller and  
14 possibly the NRC inspector.

15 Q So it is Mr. Mehler and your oncoming crew?

16 A Yes.

17 JUDGE SMITH: That answer doesn't really respond  
18 well to the question. Are you going to pursue it? A  
19 comparison of the question and answer leaves a void I  
20 believe. Are you going to pursue it?

21 MR. BLAKE: I intended to ask one more question  
22 to see if I could clarify what he meant by that.

23 BY MR. BLAKE:

24 Q With respect to Mr. Mehler and the oncoming crew  
25 that you briefed, your characterization that they regarded

Sim 9-3

1 it as a serious incident, do you acquate that with their  
2 understanding or appreciation of what had occurred or what  
3 had caused the spike?

4 A I relate that to their appreciation of the fact  
5 that they recognized that it was a serious consequence, if  
6 you will, especially when I think in terms of my discussion  
7 with the oncoming crew.

8 Q Serious meaning that the spike was real and that  
9 you had had this pressure excursion?

10 A Yes.

11 Q Serious meaning that its cause could be related to  
12 hydrogen?

13 A I think serious in that the cause could be related  
14 to hydrogen. Especially I remember that distinctly with the  
15 oncoming crew when I briefed them about it.

16 Q And that the cause of the hydrogen may have been  
17 a zirc water reaction was well, or due to a zirc water reaction?

18 A Again, I can't really recall if, you known an  
19 actual discussion of the zirc water reaction was included in  
20 that, or if it was just an assumed part of the discussion.

21 Q Was it your sense that these individuals were  
22 listening to what you had to say about it or your understanding  
23 of the spike, or that they had their own interpretation or  
24 understanding of the spike?

25 A It was my impression that they were listening to

Sim 9-4

1 my interpretation of the spike.

2 Q Would your training prior to March 28th, 1979 have  
3 been different in any way that you can describe from the  
4 other individuals who were in the control room that day,  
5 the Mehler's or Miller's or ---

6 A Well, in some cases, like, for instance, Brian  
7 Mehler, as an example, I had put six years in the Nuclear  
8 Navy, which he did not. His only training was at Three Mile  
9 Island, and there were some other individuals like that. But  
10 other than that, I would say that my training was not different  
11 from anybody else's.

12 Q Do you recall in the Nuclear Navy having been  
13 trained on or discussed the zirc water reaction or the  
14 generation of hydrogen in a Navy nuclear plant?

15 A No, I don't recall that.

16 Q So when you testified earlier today that you  
17 believed you had been trained on the zirc water reaction,  
18 that is your recollection of training you received while  
19 you were at Three Mile Island?

20 A Yes, and I am not saying that I didn't have that  
21 training in the Navy also. I may have, but I just don't  
22 recall.

23 Q How many times have you now been interviewed on  
24 this subject?

25 A I have lost count.

Sim 9-5

1 Q Well, over the weekend you reviewed how many  
2 interview statements?

3 A Four transcripts.

4 Q And there was the TMIA deposition conducted in  
5 September ---

6 A And this one with the Committee on Interior  
7 and Insular Affairs.

8 MR. McBRIDE: For the record, the witness is  
9 referring to a statement given before Dr. Henry Meyers and  
10 other individuals on the staff of the Committee on Interior  
11 and Insular Affairs of the House of Representatives dated  
12 May 10th, 1983.

13 And I should add that this statement was almost  
14 exclusively taken for other purposes, namely the Parks-King-  
15 Gishel matter, but at the end of the statement Dr. Meyers  
16 asked a couple of questions with respect to this subject.

17 MR. BLAKE: I guess I would have to make an  
18 observation that I have not seen that nor am I familiar with  
19 it.

20 Have you?

21 MS. BERNABEI: No.

22 MR. McBRIDE: I hadn't intended to mislead anybody,  
23 but in my review of Mr. Chwastyk's file last week it first  
24 came to my attention. I had totally forgotten it even though  
25 I was present for the interview? I would be happy to share



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1 it with counsel or the Board if they want a copy.

2 MR. BLAKE: I don't think it is necessary at this  
3 point unless your representation is that there is something  
4 different or new in there from what his prior statements have  
5 indicated.

6 MR. McBRIDE: I am sorry, I didn't quite hear  
7 you.

8 MR. BLAKE: Is there anything different in there,  
9 in your judgment, counsel?

10 MR. McBRIDE: I am afraid there may be, not  
11 different from what he has said here, but maybe new is the  
12 best way to characterize it.

13 MR. BLAKE: Well, maybe during the next break  
14 if there is an opportunity, but I don't see a need at this  
15 point.

16 MS. BERNABEI: Maybe the witness has a different  
17 answer. I can just represent I am sure another lawyer in  
18 our office has probably seen this. I have no, and I would  
19 appreciate the opportunity to review it as well.

20 JUDGE SMITH: I think it is agreed that all the  
21 parties will review it.

22 BY MR. BLAKE:

23 Q During your various interviews or depositions  
24 on the subject has it been difficult for you to remember  
25 that timing of events as they occurred during the first day

Sim 9-7

1 of the accident?

2 A Yes, as a matter of fact.

3 Q Has it sometimes been difficult for you to distin-  
4 guish whether events occurred on the first day or on the  
5 second day?

6 A In some cases, yes.

7 Q Would an example of that be your recollection with  
8 regard to instructions not to energize electrical equipment?

9 A That is, as I mentioned before, slightly confusing  
10 because I think there was more than one time that I recall  
11 that order being issued.

12 Q Do you recall testifying in October of 1979 that  
13 you don't think an instruction was given on Wednesday?

14 A I recall that because I reviewed it this weekend.

15 Q And you probably recall as well that a year later  
16 in September of 1980 saying that to the best of your recollec-  
17 tion it was on the 28th?

18 A Yes, I recall reviewing that this weekend.

19 Q So is that an example of the sort of confusion  
20 of remembering which day or when the events occurred?

21 A Yes.

22 Q Has it sometimes been difficult to distinguish  
23 what you knew and what thoughts you had on March 28th from  
24 what you subsequently learned about the accident?

25 A I don't know how to answer that. I would assume

Sim 9-8

1 that is true, but I just can't give you an example, for  
2 instance. I have learned an awful lot since the accident, and  
3 how much of that, you know, could have gotten confused with  
4 what I remember, I don't know.

5 Q It is fair to say that since the accident you  
6 have been exposed to a good deal of learning or discussion  
7 or studies of what occurred that day?

8 A Yes, that is true.

9 Q You testified I think last Wednesday and again  
10 earlier today that when you first saw the spike your reaction  
11 was you didn't know what it was. Is that fair?

12 A That is correct.

13 Q Have you testified previously that your immediate  
14 thought was that it might be an instrument problem?

15 A I may have.

16 Q My reference is to your interview in October of  
17 1979 at page 5, if you have that available to you. It is  
18 Item No. 99. I am not sure how you have that.

19 MS. BERNABEI: That was which October interview?

20 MR. BLAKE: October 30. I don't know how you  
21 have those noted, by date or by item number, but it is Item  
22 No. 99, and it is the October 30, 1979 statement.

23 (Pause.)

24 JUDGE SMITH: What page?

25 MR. BLAKE: Page 5 and carries over to 6.

Sim 9-9

1 THE WITNESS: Your question again, sir?

2 BY MR. BLACK:

3 Q Had you previously testified that your immediate  
4 thought was that it was an instrument problem?

5 A Yes.

6 MS. BERNABEI: I think perhaps Mr. Blake should  
7 refer to the whole answer which continues on page 6, including  
8 the sentence "But then almost simultaneously or as long as  
9 it takes to turn my head I noticed the spray pumps also  
10 started."

11 It was with the Board's guidance that we should  
12 put the statements being questions into context.

13 JUDGE SMITH: Continue with your reading of it. I  
14 think you are correct.

15 MS. BERNABEI: "When they started I knew there  
16 was an instrument problem because there are two different  
17 pressure instruments used, one for the recorder and one for  
18 starting the pumps. That led me to believe that something  
19 had happened in the building. I didnt' know what. So I  
20 checked my console to see if I could surmise or get any kind  
21 or type of information, and by that time, of course, the  
22 pressure came back down to where it was.

23 BY MR. BLAKE:

24 Q Mr. Chwastyk, is it your testimony today that  
25 in an instantaneous fashion such as has just been read that

Sim 9-10

1 you realized that the pressure spike was real?

2 A Instantaneously ---

3 Q Well, within a minute or seconds or however you  
4 would ---

5 A Well, you know, there was -- during any type of  
6 evolution in a control room when something happens, you use  
7 all of your experience and training to try to put together  
8 what is happening. I know I have personally run gamuts from  
9 instrument problems to actual problems and anything in between,  
10 and that was what I was indicating here.

11 Initially when the pressure went up of course I  
12 had no idea what was happening. But after I had some time  
13 in which to analyze the problem, I concluded that because of  
14 certain things that the pressure spike was in fact real.

15 Q Have you subsequently testified that you came to  
16 believe that the pressure spike was real after discussing  
17 the pressure spike with Mr. Mehler?

18 A Yes, that is true. We discussed the pressure  
19 spike. I had discussed it with Mr. Mehler and I was basically  
20 trying to determine what had caused the pressure spike.

21 Q So is it fair to say that when you first saw the  
22 spike it was something foreign to you and you didn't know what  
23 it was. You thought it might be an electrical problem, but  
24 when you saw the spray pumps come on and the valves open for  
25 containment spray actuation you then had a sense that in fact

Sim 9-11

1 this pressure could be real?

2 A Yes.

3 Q And then when you subsequently discussed it with  
4 Mr. Mehler whatever he had to say further convinced you or  
5 confirmed that the pressure spike was real?

6 A Yes.

7 Q Was it Mr. Mehler who first raised with you, to  
8 the best of your recollection, the business about the logic  
9 of the sensors?

10 A That is possible, yes.

11 Q Is it your testimony today that when you discussed  
12 this with Mr. Mehler that there was any discussion either  
13 by you or by Mr. Mehler of hydrogen?

14 A I vaguely remember a discussion about a chemical  
15 reaction of sorts. Now whether we discussed it was hydrogen  
16 or if I came to that conclusion myself, I don't really recall.

17 end Sim  
18 Joe fols

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1 Q Let me go over, if I can, the events as best you  
2 can understand them, or recall them, immediately after you  
3 saw the spike. I think you testified that you observed the  
4 spike actually as it was recorded on the chart?

5 A That is correct.

6 Q And there is some period of time while you  
7 tried to understand what has occurred, and after a period of  
8 time which I will represent to you was six minutes, you  
9 secured the spray pumps and shut off the valves to terminate  
10 containment spray, is that correct?

11 A That is correct.

12 Q Was it then that you ordered the checks which  
13 you referred to?

14 A Yes.

15 Q And was it then that you had the conversation with  
16 Mehler which further convinced you or confirmed that the  
17 spike was a real indication rather than some fluke; electrical  
18 fluke or malfunction.

19 A I am not sure of the sequence there. I am not  
20 sure if we discussed it and came to the conclusion that it  
21 was real, and then I ordered the checks; or if I ordered the  
22 checks, and then we -- I am not sure what the sequence there  
23 was.

24 Q But in any event, those items came after this  
25 period of time while the sprays ran and you satisfied yourself

1 that there wasn't a need to continue to spray down the  
2 containment?

3 A That is correct.

4 Q Then I believe you testified subsequent to the  
5 conversation with Mr. Mehler that you heard from some source  
6 about a noise which has occurred in the same time frame, is  
7 that correct?

8 A That is correct.

9 Q And it was then that you put together the noise  
10 with the cycling of the valve with the realization that the  
11 recording of the pressure spike had been real, and came to the  
12 conclusion that this was a hydrogen explosion?

13 A Yes, that is correct.

14 Q And it was then that you made what you describe  
15 as a beeline to the shift supervisor's office to talk with  
16 Mr. Miller?

17 A That is correct.

18 Q And your conversation with Mr. Miller ensued, where  
19 you are certain that you described to Mr. Miller the spike and  
20 your belief that it was real, but you are uncertain as to  
21 whether or not you talked about explosion or hydrogen  
22 explosion or what it told you about the degree of problems  
23 with the core?

24 A I recall --

25 Q I can break that down for you, if you want me to.



1           A     No, I recall discussing about the pressure spike,  
2 and indicating to Mr. Miller that my impression was that  
3 the spike was, in fact, real, and relating to him the  
4 simultaneous opening of the valve and the loud noise.

5           Q     How would you characterize the length of the  
6 conversation you had with Mr. Miller, which started in the  
7 shift supervisor's office, and then pursued him out to the  
8 control room as he looked at portions of instrument indications  
9 or I don't know what in the control room?

10                     About how long would you describe that?

11           MS. BERNABEI: I am going to object only to the  
12 characterization of pursue, which suggests somehow it was  
13 voluntary. My understanding of the testimony is that there  
14 was a moving conversation. The way Mr. Blake phrased it,  
15 --

16           MR. BLAKE: That is a fair objection, and I  
17 will just ask the witness.

18                     BY MR. BLAKE: (Continuing)

19           Q     Is that a fair characterization that you pursued  
20 Mr. Miller as he came out in the control room in order to  
21 continue to discuss this subject?

22           A     That would be fair, yes.

23           Q     And about how long would you characterize this  
24 conversation to last, if you can?

25           A     About -- I would say two to three times as long

1 as it took me to describe what I relayed to Mr. Miller to  
2 you. You know, however long that took.

3 Q And was it your sense that Mr. Miller was absorbing  
4 what you were saying, focusing on what you were saying, or  
5 preoccupied with other things or -- those aren't the only  
6 possibilities, correct?

7 A Mr. Miller did give me the impression that he was  
8 preoccupied or he had other things that he was discussing or  
9 thinking about, and I am sure he did. Does that answer your  
10 question?

11 Q Yes. Now, and is it your testimony that you are  
12 unclear as to exactly what Mr. Miller was observing or doing  
13 at the time you were having this discussion?

14 A Yes.

15 Q You testified I believe last Wednesday that you  
16 were unaware whether or not Mr. Miller, as a result of this  
17 conversation, either himself investigated or caused to be  
18 investigated what you had just told him about. Is that true?

19 A I don't recall that.

20 Q Well, let me ask you the question again. Do you  
21 know whether or not Mr. Miller followed up on what you told  
22 him, or caused others to follow up on what you had told him?

23 A I don't know how to answer that, because I am  
24 not exactly sure what the question is.

25 Q I think specifically the question that you were

1 asked last Wednesday was do you know whether or not Mr. Miller  
2 investigated the spike following your conversation, or caused  
3 it to be investigated.

4 A I seem to recall Mr. Miller looking at the reactor  
5 building pressure recorder. Now, that -- you know, if that  
6 is investigating it, I don't know.

7 Q But is that the extent of what you believe to have  
8 been his actions to investigate or come to understand what  
9 you were telling him subsequent to that conversation, or do  
10 you have any knowledge that he did anything more?

11 A He gave me permission to draw the bubble in the  
12 pressurizer.

13 Q Earlier in the day when you first assumed from  
14 Bill Zewe, the shift supervisor position, had you made  
15 recommendations to fill the system or draw a bubble?

16 A Yes, I had.

17 Q And is this the same recommendation that you made  
18 after the spike to Mr. Miller?

19 A Yes, it is.

20 Q And did you go about it in some more drastic or  
21 dramatic fashion than previously you had sought?

22 MS. BERNABEI: I object. I think it is unclear  
23 as phrased. I don't understand what you are asking that  
24 'dramatic' means.

25 BY MR. BLAKE: (Continuing)

1 Q Well, it is less important to me that you not  
2 understand than the witness not understand.

3 JUDGE SMITH: Well, I think it would be helpful  
4 if the parties understood it, too. Let's see if he under-  
5 stands it. Do you understand the question?

6 WITNESS: I am not sure.

7 MR. BLAKE: Then I will rephrase it.

8 BY MR. BLAKE: (Continuing)

9 Q You earlier on several occasions had sought  
10 permission to draw a bubble, or fill the system. Is that  
11 -- that is what you were seeking as well after the pressure  
12 spike from Mr. Miller?

13 A Yes.

14 Q And --

15 JUDGE SMITH: You are using a verb there. Draw  
16 a bubble and 'X' the system. And I don't hear what that  
17 verb is.

18 MR. BLAKE: Fill.

19 JUDGE SMITH: Fill the system.

20 WITNESS: Let me just -- maybe I missed that, too.  
21 At the time, I really didn't know how much the system needed to  
22 be filled. All I knew is that we did not have a good  
23 indication of level in the reactor cooling system, and drawing  
24 the bubble and getting the bubble in the pressurizer would be  
25 the means of doing that. So maybe I misheard the question

1 also, because I wasn't thinking too much in terms of fill,  
2 because I had no idea where we stood in terms of level  
3 in the reactor vessel.

4 BY MR. BLAKE: (Continuing)

5 Q Was it your sense to do this before the pressure  
6 spike in order to get into a more conventional or  
7 understandable mode of operation that day?

8 A That is correct, yes.

9 Q You felt uncomfortable with the fact that you had  
10 no existing level in the pressurizer, and therefore were  
11 unsure at least in what we normally think of as an indication  
12 of level in the primary cooling system?

13 A That is correct.

14 Q And that was your same desire after the spike?

15 A That was my desire after the spike, but it was  
16 more pronounced desire, I guess.

17 Q Because you felt less comfortable with being in  
18 this position that you didn't understand?

19 A That is right. I felt less comfortable than I  
20 had previous to the spike.

21 Q And you now believe that you received authorization  
22 from Mr. Miller to go ahead and draw the bubble within the  
23 same conversation that took place before he left to go to  
24 the lieutenant governor's office?

25 A That is correct.

1 Q And earlier there was an attempt made to have you  
2 distinguish between repressurization and drawing a bubble.  
3 Let me try and see -- was it your desire prior to the pressure  
4 spike to draw a bubble so that you would be in a more  
5 conventional or understandable mode of plant operation in  
6 concluding, presumably, an indication of coolant level in  
7 the pressurizers -- in the primary coolant system?

8 A That is correct.

9 Q And was that your desire after the pressure spike  
10 as well?

11 A Yes.

12 Q Have you ever testified, or is it now your belief  
13 that in addition you wanted to repressurize the system?

14 A Not that I can recall.

15 Q Earlier in the day when there were opinions  
16 registered by some, and you had your own views about whether  
17 or not there had been core damage, what was your sense of what  
18 core damage you were thinking about? What is your sense now  
19 of what you had in your mind?

20 A My sense now is, and I think I have testified to  
21 this before, I didn't really quantify or qualify in my own  
22 mind how much or how significant or whatever the core damage  
23 was.

24 I sort of held it off in abeyance in my own mind  
25 because it had nothing to do with what I felt had to be done

1 at the time, which was to get ourselves into a position  
2 where we knew what our plant status was, and I had the  
3 same thought with temperatures, when T-hot recorders,  
4 for instance, they were pegged. How much hotter they were,  
5 I really -- that was a secondary problem. The first problem  
6 that I saw to be taken care of was to get the temperatures  
7 down to some recognizable area, and I think I had the same  
8 thought towards core damage.

9 It was secondary to getting ourselves in a position  
10 where we understood where we were at.

11 Q But there had to have been some explanation for  
12 the high readings that you were seeing both in temperature  
13 and radiation earlier in the day, which was attributed in  
14 some fashion to this term, 'core damage.'

15 A Earlier in the day being --

16 Q Prior to the pressure spike. Is that what is  
17 intended by your answer?

18 A Yes.

19 Q And subsequent to the pressure spike, did you  
20 attempt to make any quantification or otherwise determine  
21 what core damage meant to you?

22 A In the sense that after the pressure spike I  
23 realized that perhaps the amount of core damage was not as  
24 secondary as I thought. In terms of -- I had to think a  
25 little bit more about the possibility that the core was

1 damaged more severely than I had thought or anybody else had  
2 thought, and second of all, the thing that bothered me was  
3 the fact that in the situation we are in, I had no idea  
4 whether or not that core damage was continuing.

5 I had no indications to me in the plant to tell  
6 me that we are not damaging the core at that moment, let alone  
7 what had transpired before.

8 Q Is that tied in with your concern following the  
9 pressure spike as to whether or not the core was uncovered?  
10 You earlier testified I believe that you had a concern right  
11 after the pressure spike as to whether or not the core was  
12 uncovered. If I am not correctly characterizing --

13 A Now, that is pretty much what I reiterated here.  
14 I just did not know, based on the information I had, on  
15 whether or not the core was covered or we were damaging it  
16 further or whatever.

17 Q And what steps did you then take if you weren't  
18 sure that the core was uncovered, to ensure that it was  
19 covered?

20 A I tried to establish a level indication in the  
21 reactor cooling system to make a determination, and by that  
22 I mean we took the steps necessary to draw a bubble in the  
23 pressurizer.

24 May I explain that somewhat?

25 Q Sure.



1           A     Okay. To understand, you have to understand the  
2 plant conditions at the time. We were sitting there with a core  
3 flood tank supposedly floating on reactor cooling system,  
4 and using the core flood tanks as an indication of level  
5 in the reactor cooling system.

6           The core flood tanks, of course, have two check  
7 valves inbetween the reactor cooling system and the core  
8 flood tanks. So, we had no means of really knowing if that  
9 core flood tank mode of operation was, in fact, correct.

10           We had temperatures that were pegged. They  
11 had been pegged all day. My thoughts were well, you know,  
12 for cooling the core, we should see temperatures coming  
13 down, and they weren't. The pressure spike came along.  
14 I could no longer take this information and treat it with  
15 the amount of trust I had before the pressure spike.

16 End 10.  
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1 Q And what you have just indicated to me, is it  
2 your recollection that you said that to anyone else that  
3 day?

4 A I said the gist of most of that, which was that,  
5 you know, we really don't know where we are at, and we've  
6 got to find out where we are at and the only way I know  
7 to do that is to get a level on that pressurizer.

8 Q And is it your recollection now that you took  
9 those steps promptly or immediately?

10 A Promptly, yes. You know, as best we could under  
11 those conditions.

12 Now, I don't specifically recall, all the pre-  
13 parations that we had to do it, the 3 o'clock time frame,  
14 I have no idea if that's correct or not.

15 Q I can represent to you, and I don't think there  
16 is any dispute, that the block valve was closed at about  
17 3:08 in the afternoon, subsequently reopened on a couple  
18 of occasions. But that's the time frame when it was closed  
19 after the pressure spike.

20 A Let me just point out that closing of the block  
21 valve -- again, I have not looked at, except for one of  
22 my interviews that I did back in May, I guess, where the  
23 NRC had plant parameters available that we discussed this  
24 part of the depositions, I have not seen those since that  
25 time. But at that time, in the May, I believe it is,

#11-2-SueT 1

2 interview we looked at those plant parameters and based on  
3 that it looked like around 2 or 2:30 we had started -- we  
4 turned the pressurizer heaters on.

5 Q And would the pressurizer heaters be effective  
6 in drawing a bubble with the block valve open?

7 A No, they wouldn't, not usually.

8 Q You say not usually? Ever?

9 A Well, I mean, there probably are certain cir-  
10 cumstances. I can't think of any.

11 JUDGE SMITH: With the PORV closed?

12 WITNESS CHWASTYK: Yes, I believe it was. But,  
13 again --

14 MR. MC BRIDE: With the --

15 WITNESS CHWASTYK: Oh, with the --

16 JUDGE SMITH: You are referring to a block valve  
17 blocking the PORV?

18 WITNESS CHWASTYK: Yes.

19 JUDGE SMITH: All right. Was the block valve  
20 open and the PORV closed?

21 WITNESS CHWASTYK: I just don't recall.

22 BY MR. BLAKE: (Continuing)

23 Q Let me ask you this, Mr. Chwastyk. That day,  
24 were you operating the PORV after the accident in order  
25 to provide this pathway out of the top of the pressurizer,  
or were you cycling the block valve?

#11-3-SueT

1           A       I don't recall which it was. We were operating  
2 something, either the block valve or the PORV.

3           Q       I'm sorry. Would you please --

4           A       We were cycling either the block valve or the  
5 PORV. I'm not sure which prior to the pressure spike to  
6 provide a flow path. Yes.

7           Q       If your concern shortly after the pressure spike  
8 was that there was hydrogen generated, did you also have a  
9 concern -- is this what you mean by whether or not there  
10 was continuing core damage, whether or not you were con-  
11 tinuing to generate hydrogen?

12          A       Yes, I did.

13          Q       And you earlier described the pathway for the  
14 hydrogen into the containment as being out the pressurizer?

15          A       Yes.

16          Q       If that were the pathway, and you had the con-  
17 cern of hydrogen, why wouldn't you close the block valve  
18 quickly?

19          A       My problem was that putting together the fact  
20 it was an explosion and the fact it was simultaneous with  
21 the operation of that valve, whichever one it happened to  
22 be, I was concerned about a re-explosion, if you will. And  
23 it wasn't until much later that evening that it dawned on  
24 me: Well, hell, we've already burned it out, we can't be  
25 producing it that fast that it would concentrate again.

#11-4-SueT

1 Q What led you then to operate the block valve in  
2 the 3:08 time frame and subsequently cycle it on a couple  
3 of occasions in the afternoon if your concern wasn't  
4 alleviated until the evening?

5 A Because we had no choice. We could not --  
6 there was not enough volume in the pressurizer to fill  
7 the reactor coolant system, and we were not injecting fast  
8 enough so that periodically during the day the level in  
9 the pressurizer would get too low and we would have to  
10 shut the heaters off. And when we did that, I seem to  
11 recall we also opened up that flow path for the reactor  
12 coolant system.

13 Q So, you recognized that there was a potential  
14 problem with cycling the valve but it was the lesser of  
15 a couple of evils?

16 A Yes.

17 Q The instruction which you recall having given  
18 with regard to electrical equipment shortly after the  
19 spike, was it generally for electrical equipment or was  
20 it more specifically something occurred with regard to  
21 the block valve or the MOV, don't operate it?

22 A It was in my mind that it applied to the block  
23 valve or the electromagnetic relief valve because that  
24 was the only thing we were operating.

25 And now I don't know, you know, if I combined

#11-5-SueT 1

those two or separated those two. I'm not sure.

2

JUDGE SMITH: I wonder if this wouldn't be an appropriate time to clarify the various terms used for the two valves that you are speaking about now. First, you are talking -- we've used the term MOV and EMOV and PORV and block valve and a few other variations.

3

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There are two valves in line?

8

WITNESS CHWASTYK: Yes.

9

JUDGE SMITH: Are they both operated by electric mechanism?

10

11

WITNESS CHWASTYK: The block valve is. The EMOV or the electromagnetic relief valve, as I seem to recall, you didn't actually operate the valve, you just send a signal.

12

13

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JUDGE SMITH: All right. Isn't that actually an electromatic relief valve?

16

17

WITNESS CHWASTYK: Yes. But it was not in terms of -- when I say we did not actually operate the valve, when you operated a switch you didn't actually energize a motor that opened the valve; it was a different type switch.

18

19

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JUDGE SMITH: That valve is also known as the PORV?

22

23

WITNESS CHWASTYK: Yes.

24

JUDGE SMITH: And the block valve, is that ever known as an MOV?

25

#11-6-SueT 1

WITNESS CHWASTYK: No.

2

JUDGE SMITH: I think you have just, in the most recent exchange, used it in that sense.

3

4

In any event, the block valve is not the MOV and not the EMOV and not the PORV?

5

6

WITNESS CHWASTYK: Right.

7

BY MR. BLAKE: (Continuing)

8

Q All three of those letters being a way of referring to the one electromatic relief valve?

9

10

A (The witness is nodding in the affirmative.)

11

Q And block valve being a blocking valve for the same pathway downstream from that PORV or electromatic --

12

13

A Correct.

14

Q Mr. Chwastyk, are you aware that Mr. Mehler has testified that hydrogen was not discussed with you on March 28th?

16

17

A I may be aware, may have been aware. I'm not sure. And I'm not sure that it was myself.

18

19

Q Are you aware -- or, do you recall now whether when you talked with the NRC inspector that conversation carried on in any more detail beyond the fact that the spike was real?

20

21

22

23

A Only to the degree on which I based my conclusion that the spike was real, and that is, you know, the spray pumps starting, the valves opening, that type of --

24

25

#11-7-SueT

1 Q The two out of three logic --

2 A Yes.

3 Q But not that the conversation went to either  
4 the fact that it had been an explosion or a hydrogen  
5 explosion or due t zirc water or other --

6 A I don't recall that part.

7 Q Are you aware that the individuals who you  
8 briefed in the oncoming crew have testified that hydrogen  
9 or explosion was not discussed with them?10 MS. BERNABEI: Objection. I would like reference  
11 to specific interviews. In fact, there is a reference in  
12 one, and I believe possibly two, interviews that hydrogen  
13 was mentioned.14 I think it's appropriate to refer to specific  
15 interviews.16 MR. BLAKE: I will refer the witness to Item  
17 Number 60 out of the Joint Mailgram Exhibit.18 MR. MC BRIDE: Mr. Blake, excuse me, I haven't  
19 the faintest idea what Item 60 is, but sometimes if you  
20 tell me who the witness is and when the statement was given  
21 that helps me a lot more.22 MR. BLAKE: Sure. I can provide you a copy as  
23 well. This is Mr. Mell's, July 14th, 1979, statement at  
24 Pages 11, 12. And the other one will be Item Number 36,  
25 which may not be in that same volume. It is Mr. Illjes'



#11-8-SueT<sup>1</sup>

2 testimony of May 23rd, '79 at Page 8. The Item Number, Mr.  
3 McBride, is 36. And the Page Number is 8.

4 MR. GOLDBERG: What was the page number on Item  
5 60, please?

6 MR. BLAKE: 60, 11 to 12, 11 through 12.

7 JUDGE LINENBERGER: I'm sorry, Mr. Blake. I  
8 have some confusion here. Did you say Item 30?

9 MR. BLAKE: No, sir. The first Item Number was  
10 60 for Mr. Mell. And the second one was Item Number 36.

11 JUDGE LINENBERGER: 36. Thank you.

12 MS. BERNABEI: What is the first one, the  
13 pages?

14 MR. BLAKE: The first one was Pages 11 to 12.

15 (The witness is looking at the documents refer-  
16 red to.)

17 WITNESS CHWASTYK: On 36, what was your --

18 BY MR. BLAKE: (Continuing)

19 Q On Item Number 36, it was Page 8. Mr. Illjes  
20 is asked -- and you might read the several pages thereafter  
21 as well after Page 8 where Illjes discusses conversations  
22 in the evening.

23 A On Page 10, Mr. Illjes states that it was discussed  
24 the first evening if my reading is right.

25 MS. BERNABEI: That's my reading of it.

MR. BLAKE: That's correct.

#11-9-SueT 1

BY MR. BLAKE: (Continuing)

2 Q My question -- I thought your testimony was  
3 at the shift turnover you briefed the individuals not only  
4 on the fact that there was a real pressure spike but as  
5 well on the fact that there was hydrogen connected with it.

6 Was that your testimony?

7 A That's correct. Yes.

8 MS. BERNABEI: I think it's clear from Mr.  
9 Illjes' testimony that he is talking about a period that  
10 ranges from 3:30 or so when he came on shift until some  
11 time around the time the reactor coolant pump was started  
12 at 7:30. And I don't think it's at all clear from his  
13 interview what particular time in that period he was  
14 talking about.

15 MR. BLAKE: Well, Mr. Illjes will be here as  
16 a witness and we can specifically ask him.

17 BY MR. BLAKE: (Continuing)

18 Q But it's your testimony that you specifically  
19 recall talking with your crew when you briefed them when  
20 they came on that the spike had been real, first?

21 A Yes.

22 Q And what is your testimony with regard to  
23 whether or not you told them about hydrogen or that there  
24 had been a hydrogen explosion?

25 A I seem to recall that I mentioned the hydrogen

#11-10-SueT1

also to the oncoming crew.

2 Q And would you have discussed with them as well  
3 the source of that hydrogen?

4 A I don't recall it, but I -- I don't recall  
5 whether or not we discussed the source.

6 Q Can we agree, Mr. Chwastyk, that the pressure  
7 spike occurred about ten minutes of two on the 28th?

8 A That's correct, yes.

9 Q And that the core sprays ran for about six  
10 minutes?

11 A Yes.

12 Q And that after the core sprays you had a conver-  
13 sation with Mehler which lasted how long, as you discussed  
14 possibly the cause, I think is the way you have --

15 A Yeah. A minute, two minutes. I have no idea.

16 Q And some time in that time frame after the  
17 core sprays -- core sprays I referred to, and I mean  
18 containment sprays, after the containment sprays had been  
19 terminated, some place in that period you gave instructions  
20 for some sort of check, containment check --

21 A Yes.

22 Q -- or containment integrity check?

23 A Yes.

24 Q And some time after your conversation with  
25 Mehler you heard a thud or noise and then put these various

#11-11-SueT 1

signals together to attribute the spike to hydrogen?

2

A Yes.

3

Q And how would you characterize that length of time, if you can, after your conversation with Mehler?

5

Is that impossible for you to do, or would you say a minute or --

6

7

A Well, it --

8

Q Several minutes?

9

A It was during the time when I was discussing with Mehler that, you know, most of this came together.

10

11

You know, a lot of this came together in that same discussion.

12

13

Q Did Mehler mention the thud to you?

14

A I don't recall if it was Mehler or if it was someone else.

15

16

Q And it was after these events that you then

17

spoke with Mr. Miller?

18

A That's correct.

19

Q If he left at about -- if he left at 2 o'clock, would the conversation that you had with him in which

20

21

you described to him your views on the spike being real

22

have to have occurred in that one or two minute time frame immediately before he left?

23

24

A I don't know if it was one or two minutes. I

25

think it was a little longer than that.

#11-12-SueT 1

2 Q If Mr. Miller left at 2, would it not have to  
3 have occurred in just the couple of minutes time frame?

4 A Yeah, if you make the assumption that the  
5 hydrogen explosion went exactly at ten minutes of two and  
6 Mr. Miller left at exactly 2 o'clock, then, yes, that's  
7 correct.

8 MS. BERNABEI: May I just ask the basis for  
9 Mr. Blake saying that Mr. Miller left exactly at 2? All  
10 the references I have seen, including Mr. Miller's own  
11 testimony, indicated it was approximately that time. I  
12 know of no exact.

13 MR. BLAKE: The only references I think that  
14 are available with any precision of Mr. Miller is the  
15 testimony that Mr. Miller and Mr. Herbein met on the Island  
16 before going to the Lieutenant Governor's Office, Mr.  
17 Herbein left by log in the observation center at 2 o'clock,  
18 and that they arrived in Harrisburg at the State Capitol,  
19 again I believe by log, Commonwealth of Pennsylvania log,  
20 at 2:30, after talking with Mr. Dieckamp on the steps and  
21 making the trip from the plane.

22 JUDGE SMITH: Along that same line, is it  
23 undisputed that the spike happened at exactly 1:50 p.m.?  
24 I've seen references to, for example, I believe 1:58.

25 MR. BLAKE: I don't know the basis for the 1:58.  
I thought it was undisputed that it occurred at 1:50.

#11-13-SueT1

2 JUDGE SMITH: I did, too, until we started this  
3 hearing. But it is, as far as you know, undisputed? All  
4 right.

5 BY MR. BLAKE: (Continuing)

6 Q Do you have any reason, Mr. Chwastyk, to believe  
7 that the spike didn't occur at 1:50?

8 A I have -- the only reason I have to believe  
9 it occurred at 1:50 is everybody tells me that.

10 MR. BLAKE: Right. Can I have a minute, Judge?

11 JUDGE SMITH: Yes.

12 (Pause.)

13 JUDGE SMITH: While Mr. Blake is going over  
14 his notes, the only way that I had to communicate with  
15 Mr. Gamble was by first class mail. He gave a post office  
16 box number. Had he given us a telephone, I would have  
17 had the suspension of the subpoena phoned to him.

18 If you have occasion to talk to him, I would  
19 appreciate it if you would tell him --

20 MS. BERNABEI: I can give you his business  
21 phone number if you need that.

22 JUDGE SMITH: Well, it's not going to do me much  
23 good right now.

24 MS. BERNABEI: Okay.

25 JUDGE SMITH: Since he is awaiting your further  
advice, isn't he, on responding to the subpoena?

#11-14-SueT 1

2 MS. BERNABEI: Well, I don't think he is looking  
3 to us for advice but I will certainly communicate the fact  
4 that the Board has suspended the subpoena, at least in the  
interim.

5 JUDGE SMITH: Well, the way we left it was that  
6 both subpoenaes were at the call of counsel. I don't know  
7 if that was ever communicated to him.

8 MS. BERNABEI: I'm sorry?

9 JUDGE SMITH: Both subpoenaes that we issued  
10 at your instance at the beginning of this hearing were to  
11 be -- it was to have been communicated to the subpoenaed  
12 person that the time set on the subpoena was --

13 MS. BERNABEI: Yes.

14 JUDGE SMITH: -- not the actual time --

15 MS. BERNABEI: Yes.

16 JUDGE SMITH: -- but was the earliest time and  
17 it was to be at the actual call of counsel.

18 MS. BERNABEI: Yes.

19 JUDGE SMITH: Was that ever communicated to  
20 him?

21 MS. BERNABEI: Yes.

22 JUDGE SMITH: All right. So, he does not really  
23 have any reason to believe that there is any date certain  
24 for his appearance?

25 MS. BERNABEI: No, that's correct.

#11-15-SueT1

JUDGE SMITH: Okay.

2

BY MR. BLAKE: (Continuing)

3

Q Mr. Chwastyk, let me refer you to Item Number 117,  
4 which is your interview or deposition in September of 1980  
5 to the NRC, and specifically to Page 16.

6

MR. MC BRIDE: Excuse me for just a moment,  
7 Mr. Blake. I'm not sure whether the parties are aware that  
8 certain transcript corrections to this particular interview  
9 were submitted to Mr. Moseley of the Nuclear Regulatory  
10 Commission.

11

I have those that were submitted penciled in  
12 on this copy, but it may be that the witness will be refer-  
13 ring to something that has been slightly modified.

14

MR. BLAKE: Thank you.

15

BY MR. BLAKE: (Continuing)

16

Q Mr. Chwastyk, focusing on the Lines 16 through  
17 19 there -- and I will give you an opportunity --

18

A What page?

19

Q It's Page Number 16.

20

(The witness is looking at documents referred  
21 to.)

21

22

A Yes, I've read it.

23

Q I will give you an opportunity to read in front  
24 of it and behind it so that you understand what the  
25 context is.

24

25



#11-16-SueT1

2 MR. MC BRIDE: I should note, by the way, that  
3 the -- on Line 18 in the answer that you are referencing,  
4 the second word which appears to be "in" was changed to  
5 "any of."

6 MR. BLAKE: Fine. Thank you.

7 (The witness is looking at the document.)

8 WITNESS CHWASTYK: I've read it.

9 BY MR. BLAKE: (Continuing)

10 Q The testimony in particular where you state,  
11 "As a matter of fact, there was word put out not to operate  
12 any of the equipment and I sort of kicked myself for not  
13 thinking about that myself," how do you square that state-  
14 ment with your testimony today that you initiated with Mr.  
15 Miller the thought that electrical equipment ought not be  
16 energized and sought his approval or authority to put out  
17 such an order?

18 A That operate electrical equipment was in  
19 relation to operating the block valve. Okay. And this  
20 statement here was when someone else mentioned about all  
21 electric equipment, and I had not -- what I meant here at  
22 the time was I was thinking only the piece of equipment  
23 we were operating was the block valve, and that's what I  
24 thought and that's what we had basically put out the word  
25 on, not to operate that block valve.

But when someone did mention later on all

#11-17-SueT

1 electrical equipment, that's what this applies to in this  
2 statement on September 4th. In other words, I had not  
3 thought about the possibility of someone else, you know,  
4 running some other equipment. And I should have probably,  
5 and that's why I said I could have kicked myself.

6 Q Did --

7 JUDGE SMITH: Are you leaving that point now?

8 MR. BLAKE: Yes.

9 JUDGE SMITH: All right. Here is another  
10 example, I believe, of confusing the interchange between  
11 the block valve and the other valve.

12 Did both valves figure in your concern about  
13 the coincidence of a pressure spike and your concern that  
14 they shouldn't be operated?

15 WITNESS CHWASTYK: No. Whichever valve we were  
16 operating --

17 JUDGE SMITH: Whichever? It doesn't matter?

18 WITNESS CHWASTYK: I just don't recall which  
19 one it is. And I always just refer to it as the block  
20 valve. I don't know if that, in fact, was the block valve.

21 JUDGE SMITH: Well, in this instance, if you  
22 look at the prior page, you were referring to EMOV.

23 WITNESS CHWASTYK: Yes.

24 JUDGE SMITH: Which we have just agreed now is  
25 not the block valve?

#11-18-SueT1

WITNESS CHWASTYK: Yes.

2

JUDGE SMITH: Okay. It doesn't matter?

3

WITNESS CHWASTYK: I just don't recall which one

4

it was.

5

JUDGE SMITH: All right.

6

BY MR. BLAKE: (Continuing)

7

Q Did you think at all that Wednesday, March 28th,

8

about how substantial the damage must have been to the

9

core to generate the hydrogen necessary to result in an

10

explosion?

11

A Only to the degree that it was a lot worse than

12

I thought it was initially before the spike.

13

Q When you used the term "core damage" prior to

14

the spike, is it your sense now that you at that point

15

were thinking zirc water reaction?

16

A Before the spike?

17

Q Yes.

18

A No, I don't think so.

19

Q So you don't equate the term "core damage" with

20

zirc water reaction?

21

A No. I do not.

22

Q That is, there can be core damage which results

23

from something other than zirc water reaction?

24

A Yes.

25

Q And how would you characterize that core damage?

#11-19-SueT1

2           A       Well, you know, the degree is what we are talking  
3 about. In one case, before the pressure spike we had core  
4 damage.

5                   Now, if there was zirc water reaction because  
6 the core damage that was -- I thought we had and, you know,  
7 was -- you know, I preferred to think we had at the time,  
8 was so minor that, you know, there was no concern about a  
9 hydrogen so I never even thought about it before the pressure  
10 spike.

11                   After the pressure spike, though, that gave me  
12 the impetus, if you will, to change my previous opinion  
13 of what the -- the amount of core damage we had. Now, I  
14 didn't go into quantifying how much it was.

15                   Again, I had -- my responsibility I thought at  
16 the time was to get us into a position where we knew we  
17 were no longer damaging the core and then worry about how  
18 much damage had taken place.

19           Q       Let me reask the question, if I can.

20           A       All right.

21           Q       How would you characterize whatever your  
22 thoughts were about core damage prior to the pressure  
23 spike if they were not attributable to that core damage  
24 which you would associate with zirc water reaction?

25                   MS. BERNABEI: I object to the question as vague.  
It is many ways I assume that he could characterize it.

#11-20-SueT1

1 JUDGE SMITH: Well, it's not vague in that he  
2 is asking for his characterization. A better objection  
3 would have been asked and answered.

4 He has been through the exercise it seems to me.  
5 He said that, as I recall, he had not characterized it. He  
6 had not quantified it or qualified it. It had been a  
7 secondary consideration, that he was more interested in  
8 treating the plant symptomatically.

9 And it seems to me it is the exact same question.  
10 If there is a difference -- do you see a difference between  
11 this question and the one that I identified as the same  
12 question earlier?

13 WITNESS CHWASTYK: No, I don't. That's why I  
14 answered the same way I think.

15 JUDGE SMITH: Have I characterized your earlier  
16 answer correctly?

17 WITNESS CHWASTYK: Yes, sir.

18 BY MR. BLAKE: (Continuing)

19 Q When you left the plant that day, were you --  
20 what was your sense of comfort about the status of the  
21 plant?

22 A I felt that basically the accident was over and  
23 we had control over the plant. We had the reac coolant  
24 pump running. We had a level in the pressurizer. We had  
25 a heat sink into the condensor. You know, my basic thoughts  
there was the next step now is recovery.

Sim 12-1

1 Q Well, what did you mean by the next step is  
2 recovery?

3 A Well, the next step is to find out exactly, you  
4 know, what had transpired and what had taken place, et cetera.

5 (Pause.)

6 One thing was just brought to mind. I did not  
7 leave that day. I didn't leave until the next day, the 29th.

8 Q And at the time that you left the plant you felt  
9 the plant was under control and the accident was over?

10 A Oh, yes, definitely.

11 Q And that it was essentially a matter of recovery  
12 from then on out?

13 A Yes.

14 Q Did you have a sense of the length of time that  
15 might be involved in the recovery?

16 A I thought it was going to be a long one. I was  
17 thinking in terms of six months to a year.

18 (Laughter.)

19 Q Mr. Chwastyk, is it your testimony today that you  
20 communicated to anyone on March 28th that you correlated the  
21 pressure spike with core damage? Do you recall making such  
22 a communication to anyone that day?

23 A You know, I know I characterized it in terms of  
24 this, you know, happened simultaneously with the operating of  
25 the valve which indicates, you know, a real pressure spike

Sim 12-2

1 which indicates -- whether I said or not a hydrogen explosion,  
2 I don't recall, but I used that information to indicate that  
3 the problem we had was a lot worse than what I had thought  
4 previous to that. I know I expressed it in that sense, and  
5 that is about all I can say about that. I don't know that  
6 I got into a hydrogen explosion or zirc water reactions or  
7 if I just assumed, you know, in discussions that those things  
8 would also be understood by whoever I was speaking to, except  
9 in the case when I talked to the operators that evening, and  
10 I did explain to them somewhat the explosion.

11 Q So you do not know whether or not you mentioned  
12 zirc water reaction or hydrogen to anyone with the possible  
13 exception of the oncoming shift who when you spoke with them  
14 you may have said hydrogen or you may have talked about  
15 hydrogen?

16 A Yes, that is exactly right.

17 Q Today with what you know about the accident you  
18 can talk with some conviction you were right that day in  
19 having these thoughts; is that correct?

20 A What is that?

21 Q I said today with what you know about the accident  
22 you can talk with some confidence or conviction that you were  
23 right with these thoughts that you had on March 28th? It  
24 turns out that you were right; is that correct?

25 MS. BERNABEI: Objection. There is no definition

Sim 12-3

1 of what thoughts we are talking about here. Is it the whole  
2 discussion about hydrogen and the zirc water reaction?

3 JUDGE SMITH: Do you understand the question?

4 THE WITNESS: I understand the question I think.  
5 May you had better rephrase it or reask it again.

6 JUDGE SMITH: The thrust of the question is not  
7 so much on the thoughts, as I understand it, because everyone  
8 pretty well agrees of what -- I mean we seem to understand  
9 what your impressions were that day. You saw a pressure  
10 spike and you began to think that was important, it is a real  
11 one and the scenario that followed.

12 Now the thrust of the question is that counsel  
13 concedes that the way you have expressed your thoughts was  
14 correct and accurate.

15 THE WITNESS: Okay, yes.

16 (Laughter.)

17 JUDGE SMITH: Now go on from there.

18 BY MR. BLAKE:

19 Q Is it your sense today that on March 28th you  
20 had that same degree of confidence and that same conviction  
21 that you were right, particularly when you spoke with other  
22 people?

23 A I don't know how to answer that. Let me tell  
24 you why. I had all of my indications -- all of the indications  
25 I discussed here today were the same indications I had on the



Sim 12-4

1 28th. Now whether or not I had as much confidence in them  
2 then as I do now, I have no way of knowing.

3 Remember we were in a very difficult situation  
4 at the time and I recognized that those conditions -- I just  
5 don't know how to characterize whether my confidence level  
6 was high then, you know, as it is now. It probably wasn't,  
7 but I don't even know if I could say that. I used to be  
8 a pretty confident guy in that control room.

9 (Laughter.)

10 Q Well, let me refer you to one of your prior  
11 statements in the same year as the accident in October of  
12 '79. This is Item No. 99, the October 30, 1979 statement on  
13 pages 25 to 26.

14 (Pause.)

15 THE WITNESS: Which sections were they?

16 MR. BLAKE: It was pages 25 and 26, and it is  
17 the particular sentence at 9 and 10. "At the time I had  
18 other things and I just didn't have the time to waste in  
19 thinking about what-if's essentially." But you ought to  
20 read around it, Mr. Chwastyk, so you have a sense of the  
21 conversation.

22 (Pause.)

23 THE WITNESS: I have read it.

24 BY MR. BLAKE:

25 Q What I have pointed out at is the phrase, the

Sim 12-5

1 use of the phrase "what-if's." What did you intend when you  
2 said that? Let me ask you whether by "what-if's" you were  
3 expressing some lack of confidence about your understanding  
4 of what occurred on March 28th in your own mind?

5 A I think I had better read it again.

6 (Pause.)

7 Okay. Basically what I mean by "what-if's" is  
8 any conjectures. In other words, I didn't have time to, you  
9 know, go through and quantify or make my guesstimates of what  
10 kind of fuel damage or core damage there was or whether the  
11 reactor coolant pumps were all, you know, lost to us or that  
12 type of thing, and I had the plant to operate. I recognized  
13 the direction we had to go and I was trying to move in that  
14 direction, and that was sufficient to keep my busy and keep  
15 me away from conjecturing on anything.

16 That is what I meant by that statement.

17 Q Let me try to summarize, if I can, and this is  
18 the final couple of questions that I have.

19 Is it your testimony today that on March 28th  
20 you had thoughts that the pressure spike was real, that the  
21 pressure spike was due to an explosion, that the explosion  
22 was due to hydrogen, the source of the explosion was hydrogen,  
23 that the hydrogen had resulted from a zirc water reaction and  
24 that a zirc water reaction had occurred told you that the core  
25 damage was greater than whatever you had thought prior to

Sim 12-6

1 the pressure spike? Is that correct?

2 A That is correct.

3 Q And it is your testimony today that you are not  
4 sure of the degree of confidence or the conviction that you  
5 had about those thoughts on March 28th?

6 MS. BERNABEI: Objection. I don't think that  
7 is the prior testimony. I think he has answered the question  
8 as best he could, and I think he expressed doubt about the  
9 question itself.

10 JUDGE SMITH: The witness can correct him. I  
11 don't think that is -- I am not even going to comment on  
12 my view of whether that characterizes his testimony because  
13 I don't think I should. But I think the witness is capable  
14 of answering the question.

15 THE WITNESS: Again, I just don't know if I,  
16 you know, can say one way or the other if my confidence  
17 level was higher then or now. I presume it would be now  
18 because I have a lot more information with which to base it  
19 on, and, you know, other than that, that is all I can say  
20 about it.

21 BY MR. BLAKE:

22 Q And you believe that you communicated your  
23 sense that the pressure spike was real to Mr. Miller, that  
24 you discussed it, that is that the pressure spike was real  
25 to Mr. Mehler, and that you discussed that the pressure spike

12-7

1 was real with an NRC inspector who was in the control room  
2 that day, and that you discussed that the pressure spike was  
3 real with you oncoming crew later that afternoon?

4 A That is correct, yes.

5 Q Is there anyone that I have left out with regard  
6 to that?

7 A Not that I can recall specifically, no.

8 Q And, further, with respect to your oncoming crew  
9 you believed that you had discussed the cause of the spike  
10 as being an explosion and possibly you discussed with them  
11 that it was a hydrogen explosion or probably you discussed  
12 with them that it was a hydrogen explosion but did not discuss  
13 with them how that hydrogen could have been generated; is  
14 that fair?

15 A I think that I said we may have discussed the  
16 zirc water reaction, but I just don't recall.

17 Q And have I left anybody out of who you believe  
18 today you discussed hydrogen or explosion with?

19 A I don't recall specifically, but it is very possible  
20 that I, you know, talked to other people also because there  
21 were a number of other people in the control room.

22 Q Do you recall anyone else who you may have  
23 discussed this with?

24 A Not specifically, no.

25 Q And when I say anyone else, I mean to include

Sim 12-8

1 people we have talked about previously, Mr. Miller, Mr. Mehler  
2 and the NRC inspector. I didn't mean to exclude those,  
3 Mr. Chwastyk.

4 A Oh, I am sorry. I am sorry. I seem to recall,  
5 and to the best of my recollection was that I mentioned it  
6 to Mr. Miller ---

7 Q Mentioned it?

8 A The fact there was an explosion. I am not certain  
9 about the NRC representative and I am fairly certain with  
10 Mr. Mehler also. But, again, this is, you know ---

11 Q And what about the fact that the explosion could  
12 have been a hydrogen explosion with respect to those three  
13 people?

14 MS. BERNABEI: I am going to object. This has  
15 been gone over several times now. I think these are the same  
16 questions. These particular conversations have been gone  
17 over several times with this witness.

18 MR. BLAKE: This is my last question.

19 JUDGE SMITH: Do you withdraw your objection?

20 MS. BERNABEI: Well, I still think it has been  
21 asked at least three times.

22 JUDGE SMITH: I think so, too, but let's let  
23 it be the last question. In case it hasn't been asked, it  
24 certainly should be asked. It is an important question.

25 THE WITNESS: Okay. And again, to the best of

Sim 12-9

1 my recollection, I believe I did talk to Mr. Miller about  
2 the explosion, I am fairly certain with Mr. Mehler, and I  
3 don't recall with the NRC inspector.

4 MR. BLAKE: I am about to renege that that was  
5 my last question.

6 My question was hydrogen.

7 THE WITNESS: Oh. I don't recall if I specifically  
8 mentioned hydrogen or if it was just an assumption that, you  
9 know, that I carried into the conversation.

10 MR. BLAKE: I have no more questions.

11 JUDGE SMITH: With respect to the last several  
12 questions, I am cognizant of the fact that you were also  
13 on the radio with Mr. Herbein. Would you include him in your  
14 answers?

15 THE WITNESS: Mr. Herbein, I don't believe we  
16 discussed anything other than the present plant status once  
17 we got on the radio communication.

18 JUDGE SMITH: And when was that? What time frame  
19 was that?

20 THE WITNESS: That was sometime around 5 o'clock  
21 I believe.

22 MR. McBRIDE: . Would this be a convenient time to  
23 take a break so the other counsel could look at this May '83  
24 transcript?

25 JUDGE SMITH: The what?

Sim 9-10 1

MR. McBRIDE: The transcript of the testimony to the House Committee on Interior and Insular Affairs.

JUDGE SMITH: Yes. In any event, it is a good time to take a break.

Let's take about 15 minutes. I will try to get on the phone to the office with respect to any investigation on Ethics in Government.

(Whereupon, a recess was taken from 2:37 to 3:00 p.m.)

INDEXXXXX 9

## BOARD EXAMINATION

BY JUDGE LINENBERGER:

Q Mr. Chwastyk, I am sure that you have had it up to your ear lobes with questions about spikes and pressurizers and valve operations and all those sorts of good things, but there are just a few miscellaneous items that I still have some confusion about, and I am concerned that the record may reflect that confusion. So forgive my reploting some old ground, but I need to do it.

A Excuse me, Judge. May I make one point clear on one of the questions that was asked earlier and that was who I discussed my assumptions on the pressure spike with.

I probably did not make it clear, but there were other people, you know, that were in the area when I discussed these things. So although I was discussing them with a specific individual, there were other people there at the time also. I want to make that clear so there is no

Sim 19-11

1 misrepresentation.

2 Q In other words, these discussions were not eyeball  
3 to eyeball with single individuals, but they were discussions  
4 that anybody could have listened on who happened to be there;  
5 is that correct?

6 A Yes, that is correct.

7 Q Thank you.

8 Let's talk just a moment about your relationship  
9 with people starting at the time you came on shift on March  
10 28th, and I want you to think back to your state of mind then  
11 and try to as you reflect on my question, try to divorce your-  
12 self from things that you might have learned subsequently after  
13 the fact. Let's talk about your state of mind and your  
14 thinking process and your action processes at that time.

15 You indicated that as you came on shift, if I  
16 remember correctly, that you decided that it would make sense  
17 for in essence you to take over the control console in order  
18 to assist in any way you could and also to free up others  
19 to get on with the process of finding out what was the status  
20 of things. Is that correct?

21 A That is correct, yes.

22 Q Now as you think back to then, and again I  
23 emphasize to leave aside, if you can, what you have learned  
24 subsequently or read subsequently or been asked subsequently,  
25 as you think back to that day when you first came onboard



Sim 9-12

1 that day whom did you consider you reported directly to in  
2 terms of line authority in the organization who was onboard  
3 that day?

4 A Well, the line authority, as I understood it  
5 at that time, prior to my taking the shift would have been  
6 Bill Zewe as the Shift Supervisor, Mike Ross who was acting  
7 in the place of Mr. Jim Floyd as the Supervisor of Operations  
8 for Unit 2, and then Joe Logan who was the Superintendent  
9 of Unit 2 and Gary Miller who was the Station Superintendent.

10 Q All right, sir. Now in many of the discussions  
11 that have gone on here today and last week you indicated  
12 numerous conversations or discussed conversations that you had  
13 with Mr. Miller before he had to leave, and in the sense  
14 of your discussing things that you thought were wrong with  
15 the plant or needed to be done with the plant I got the  
16 impression that you were looking to Mr. Miller for supervision  
17 or direction or assistance, if you will, rather than any  
18 of these other people you just now named before you named  
19 Miller. Now was that really the situation as you recall it  
20 and, if so, why?

21 A Well, the situation was a little bit different.  
22 The gentlemen that I just mentioned were primarily stationed  
23 in the shift supervisor's office with Mr. Miller. Mr. Miller,  
24 of course, was making the decisions, but when I would discuss  
25 anything with Mr. Miller, some or all or some part of those

Sim /9-13

gentlemen that I just mentioned also would be involved in  
the discussion.

end Sim  
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1 Q Now, at the time Mr. Miller left that afternoon  
2 of March 28th, to whom then did you look for this guidance or  
3 sounding board, or whatever purpose, in his absence?

4 A There was someone designated as being left in  
5 charge. I don't know who it was at the time. My answer to  
6 that question is when Mr. Miller left I had gotten permission  
7 to draw the bubble, which gave me a course of action, and  
8 with that course of action I had no further -- no need for  
9 any other direction or supervision that I can recall until  
10 later that evening.

11 Q There was a time that afternoon or early evening  
12 I believe when you indicated you had some discussions, I  
13 think by radio, with Mr. Herbein, is that correct?

14 A That is correct, yes.

15 Q In that situation, and pardon perhaps bad choice  
16 of words here, in that situaiton were you in any sense going  
17 around Mr. Miller in your discussions with Mr. Herbein, or  
18 how did it come about that you would be talking to Mr. Herbein  
19 about the same kinds of things, as I recall at any rate, that  
20 you had previously been talking to Mr. Miller about?

21 A Let me just briefly explain Mr. Herbein's involvement  
22 here. We had, by pumping in water and heating the pressurizer,  
23 we pumped in approximately thirty thousand gallons of water.  
24 At that point, we saw the T-hots on A-loop start coming down.

25 And it was about this time frame in which Mr.

1 Herbein got on the radio with Mr. Miller and basically  
2 directed Mr. Miller to go to full high pressure injection,  
3 and of course the radio was right there in the control room,  
4 and I suggested to Mr. Miller first that because we had seen  
5 a definite change in our plant parameters, and we were in fact  
6 on the right track, that I didn't feel that full high pressure  
7 injection was necessary.

8 At that point, Mr. Miller who was getting busy with  
9 a lot of other things suggested that I get on the radio with  
10 Mr. Herbein.

11 Q I see. So, in that sense then there was no  
12 -- I gather from what you said there was no fuzziness in your  
13 thinking about whom you ought to be talking with to get  
14 concurrence on certain recommended actions you wanted to take.

15 A That is correct.

16 Q Leaving aside at least for the moment whatever  
17 might have been your definition and your own thinking at that  
18 time now, of the term, 'core damage', you have indicated  
19 since you have been on the stand either an awareness on your  
20 part or a suspicion on your part that there had been some  
21 core damage prior to the occurrence of the now infamous  
22 pressure spike.

23 Was -- can you clear this up for me again as  
24 you thought of matters that day, trying to filter out  
25 everything that has happened since then, was a suspicion

1 that there might have been core damage prior to the pressure  
2 spike, or was it an opinion on your part, or can you answer  
3 that?

4 A Again, the best way I can answer that is I did not  
5 dwell on the question of core damage. I suspected -- as a  
6 matter of fact, I felt fairly certain that we had some core  
7 damage based on other indications I had.

8 Q Now, excuse me. Right at that point, when you  
9 say that, are you saying that in a time frame before the  
10 pressure spike had occurred? I mean, were you thinking those  
11 thoughts before the pressure spike had occurred, or after  
12 the pressure spike had occurred did you somehow think the  
13 thought well, there must have been something going on before?

14 A No. I thought those thoughts before the pressure  
15 spike.

16 Q Before the pressure spike occurred.

17 A And I thought we had suffered this core damage  
18 some time that morning, okay? I had been told that the mode  
19 in which we were operating, someone did a calculation to say  
20 that that was sufficient to cool the core.

21 After the pressure spike, my confidence, if you  
22 will, in what we were doing which was very small to start  
23 with was completely gone after the pressure spike, and that  
24 is why again after I related my thoughts to Mr. Miller, I  
25 again asked for permission to redraw the bubble.

1           Q     Can you recall that indications you had that  
2 day before the occurrence of the pressure spike, what  
3 indications you had, what kind of things you saw that made  
4 you suspicious that the -- or made you conclude that the  
5 core might have undergone, or be in some trouble?

6           A     There were a number of things. Primarily, the  
7 radiation levels in the plant, specifically in the reactor  
8 building. They were awfully high. The water in the aux  
9 building, that had flooded in the aux building was awfully  
10 hot.

11          Q     Excuse me. When you say, 'hot,' some of us use  
12 the words in a radioactive sense, and some of us use it in a  
13 thermodynamic sense.

14                     Which are you using?

15          A     Radioactive sense. I am sorry.

16          Q     Thank you.

17          A     Some indication that I had of what transpired  
18 earlier. For instance, the loss of the reactor coolant pumps.  
19 That indicated to me, of course, a loss of coolant. That,  
20 in conjunction with the radiation levels and some other things  
21 indicated to me that in fact there was core damage.

22          Q     And so far as you know, what you are saying just  
23 now reflects your state of mind that day rather than after  
24 the fact with all the depositions and discussions and so  
25 forth?

1 A Yes, sir. That was after.

2 Q All right, sir. You spoke several times about  
3 the cycling of valves. And it sounds logical to me that you  
4 would want to try a number of different valve configurations  
5 at different times.

6 Let me ask you, was there confirmatory indication  
7 in the control room that each of the valves you operated, or  
8 attempted to operate had, indeed, responded to the operational  
9 command.

10 In other words, I can visualize pushing an open  
11 button or a close button, and saying: Gosh, I hope the valve  
12 does what I told it.

13 Was there an indication in the control room that  
14 these various valves did follow the commands to open or  
15 close, or was this true of some valves and not true of others.  
16 Or can you answer that?

17 A Now, remember now I have been away for quite --

18 Q Sure.

19 A In relation to the block valve, there was positive  
20 indication the actual valve position was based on switches  
21 on the valve operator itself, that would change colors from  
22 green to red, depending on what position the valve was.

23 Electromagnetic or the PORV, or EMOV or whatever  
24 we want to call it, there was not that indication. The only  
25 indication you had there was the signal being sent to the

1 valve.

2 Q What if the valve had been stuck and did not  
3 respond to the signal, you would not know that directly  
4 from the indication?

5 A You would not know that directly from the  
6 indication.

7 Q But which was the one valve again that did have  
8 indication?

9 A The block valve.

10 Q There has been some amount of interest in the  
11 strip chart recorder paper on that recorder, or those recorders  
12 that indicated pressure in the reactor building, and I under-  
13 stand that reactor building is a term that is synomyous  
14 with containment building, or at least I think that is true.

15 A Yes.

16 Q Okay. Now, some time after there had been this  
17 pressure spike, and the chart had moved but had not -- the  
18 paper was not exhausted, was it possible, was it practical,  
19 was it standard practice for someone to walk up to such a  
20 recorder and say: Gee, I would like to review recent history;  
21 and sort of catch hold of the paper that had already passed  
22 under the bin, pull it out a ways so that they could see  
23 what had gone on before, was that kind of thing possible in  
24 the first place. Second place, if it was possible, was it  
25 routinely done?



1           A     Well, it was possible, and it was done. Whether  
2 I can say routinely, I don't know.

3           Q     Well, lets talk about normal plant operation,  
4 forgetting the accident for the moment. It would seem to me  
5 that a person curious about what might have gone on before  
6 two or three hours earlier might walk up to such a recorder,  
7 pull the paper out just to see, and then let it flip back and  
8 continue its operation.

9                     Is that --

10          A     In that sense, it was done -- my problem is  
11 the definition of, 'routine.'

12          Q     But at least, that is not a forbidden action.

13          A     If you wanted to see what had transpired, you know,  
14 you did exactly that.

15          Q     And there is nothing about the recorder -- the  
16 strip chart recorder mechanism that prevented that being  
17 done?

18          A     No.

19          Q     And if that were to have been done at any time,  
20 and I am not focusing right now on the accident, would not  
21 such a -- let me ask the question affirmatively.

22                     Would such a looking back in history cause a  
23 discontinuity or an anomaly in the pen trace at the time this  
24 looking back too place?

25          A     That would depend on how carefully it was done.

1 Q So it is possible for it to be done without  
2 causing an anomaly?

3 A Not really. Even if you are really careful, the  
4 first thing you have to do is pull the recorder out, and  
5 usually just by pulling the recorder out you would get some  
6 kind of a blip on the pen, but other than that, you can in  
7 fact pull back the paper and roll it back up again without  
8 causing too much of a fluctuation.

9 Q Again, sir, try to focus on your thought processes  
10 that afternoon. You have indicated the reason for your  
11 opinion, an opinion you held prior to the occurrence of the  
12 pressure spike, that the core might be in trouble. High  
13 radiation levels in the reactor building, radioactivity in  
14 the water in the auxiliary building, et cetera.

15 Now comes the pressure spike, and that pressure  
16 spike in the reactor building or containment building, the  
17 core of course is in the reactor vessel, or pressure vessel,  
18 and you have indicated on several occasions why you would  
19 believe that spike actually meant a momentary pressure  
20 elevation, so we won't go into that.

21 But what I am looking for is, as you can think  
22 back to that day, was there anything about that event that  
23 caused you to think in terms of a different kind of core  
24 damage mechanism than you had thought about before the  
25 pressure spike?

1           Now, I know that is putting a strain on your  
2 memory, but --

3           A     I don't think it did. Again , I did not delve  
4 that deeply into the core damage and the cause and the  
5 effects and characterizations of any kind. It was there,  
6 but it was not of primary importance.

7           Q     Sure.

8           A     Now, that is to me. Now understand that. There  
9 were an awful lot of people involved with the plant and the  
10 accident itself. I probably just made the assumption that  
11 someone else is going to look at that and worry about that.

12                     My concern was operating the plant.

13           Q     Right. Understood. And my concern is to try to  
14 reconstruct as much as possible what went on in your mind at  
15 that time, realizing that there were other people there to  
16 worry about other things.

17                     Keeping in mind that a reactor such as yours  
18 had, and present day plants have, many kinds of protective  
19 devices, for the moment I will speak for myself and say had  
20 I seen that pressure spike, decided for myself that it  
21 really meant the pressure increase and not a fluke of any  
22 sort, with all the many layers of protection that are involved,  
23 I think my first reaction would be to try to look for a source  
24 of that pressure spike that was -- especially since it was  
25 in the containment building, not in the reactor vessel, that

1 was, perhaps, independent of anything going on in the reactor  
2 vessel.

3 Now, can you recall -- did you have such a first  
4 reaction after you confirmed yourself that it was indeed a  
5 true pressure spike, but did you have that kind of reaction  
6 that it may have little or nothing to do with the core?

7 A That was my -- one of my initial reactions. The  
8 core -- the fact that it came from the core was the last  
9 sort of after a process of elimination, was the last idea  
10 that I had.

11 For instance, you know, not only did we check the  
12 reactor building, we checked plant parameters to see if,  
13 for instance, do we just go through a loss of coolant  
14 accident? Did we break a pipe in there? Did we have a  
15 steam leak? Do we have any indication -- those type of  
16 indications are the things we checked first.

17 Q We have heard mention in earlier testimony -- I  
18 have forgotten from whom -- that in order to minimize the  
19 effect of radialysis of water, it was customary practice to  
20 inject hydrogen into the reactor coolant water in order to  
21 function -- the hydrogen to function as a sort of a getter  
22 -- to suppress -- scavenger. To suppress oxygen release.

23 Now, that implies there had to be a source of  
24 hydrogen available somewhere. Did you, again, on that day  
25 if you can remember, think about a source of hydrogen from

1 some place else other than the core, such as the hydrogen  
2 to be made available to scavenge oxygen.

3 A That hydrogen comes from hydrogen over-pressure  
4 in the makeup tank, which is located inside the aux building,  
5 and not the reactor building.

6 I don't know, and I can't say right now, whether  
7 or not -- understand that the explosion came to mind only when  
8 I realized that it happened simultaneously with the operation  
9 of the valve, and I think almost simultaneous with that  
10 thought that it was an explosion came the hydrogen affect.

11 Now, I don't know -- I think once I made that  
12 commitment to hydrogen was naturally zirc water reaction.  
13 I don't know that I thought in terms of: Did we concentrate  
14 hydrogen in there from the makeup tank? And probably the  
15 reason I didn't think that was the fact that if we had had  
16 a problem of overusage of hydrogen, being that I had been on  
17 the console there for about two hours, I would have known  
18 about it.

19 Q All right.

20 A Based on that I did not think in those terms.

21 Q From everything I think I have heard you say that  
22 reflects your thinking on that day, I conclude that the first  
23 time that a consideration of zirconium steam or zirconium  
24 water interaction entered your mind, occurred after the  
25 occurrence of the pressure spike. That is my impression. Is

1 that --

2 A That is correct, yes.

3 Q Does that reflect reality?

4 A Yes, that is correct.

5 Q But you did think in those terms, and I appeal to  
6 the Board's immunity from asked and answered objections here,  
7 you did think in those terms on that day, the 28th of March  
8 1979, that there may have been a reaction between zirconium  
9 and water and/or steam?

10 A That is the only place in my experience and  
11 training could come up with where an explosive mixture would  
12 come from. It was a process of elimination.

13 Q Okay. But I am emphasizing not how you reached  
14 that conclusion, so much as was it reached on that first day  
15 of the accident, March 28th, 1979?

16 A Yes, it was. To the best of my memory.

17 Q Sure. Well, I realize you are asking you to  
18 crank your mind back here and try to filter out these other  
19 things. I believe that is all the questions I have.

20 XXX INDEX

BOARD EXAMINATION

21 BY JUDGE SMITH:

22 Q I have heard you answer that question several  
23 times now, not in the context just asked, but you always  
24 give the same answer which from -- from which one could infer  
25 that you concluded it was a zirc water reaction because of a

1 process of elimination.

2 A That is correct.

3 Q And this is the first time you have actually  
4 expressed it quite expressly. You said several times in  
5 deposition and in testimony here that you knew it was nothing  
6 else. I just want to clarify. Did you affirmatively know  
7 or believe that it was a zirc water reaction?

8 End 13.  
9 SueT fols.

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#14-1-SueT 1

2 A I -- we checked everything that was available to  
3 us to indicate what had caused the spike. I did recognize  
4 that it was a real increase in pressure initially. We could  
5 not, in checking everything that was available to us,  
6 determine what could have caused that.

7 Someone talked about chemical reactions. That  
8 was one of the things that was being discussed. Another  
9 thing was instrument error, some problems with the instru-  
10 ment type thing.

11 Some period in time there I distinctly remember-  
12 ing the fact that the operator turned that valve and about  
13 that time that pressure spike went up. After I had eliminat-  
14 ed, you know, reasonable possibilities -- by reasonable  
15 possibilities I mean, you know, a break in a piping, either  
16 on the steam side or the reactor coolant side, you know,  
17 instrument error, all those things, after they were all  
18 dissipated in my mind to show that they were not in fact  
19 the cause of the pressure spike, and then connecting that  
20 operation of that valve with the increase in the pressure,  
21 my thought was it was due to a hydrogen and that hydrogen  
22 was coming from the pressurizer itself. Okay.

23 Now, I'm not sure that, you know, fully answers  
24 your question.

25 Q Yes, that does. And to carry it one step  
further, and that the hydrogen coming from the pressurizer



#14-2-SueT 1

itself was produced by zirc water reaction.

2

A Yes.

3

Q You affirmatively believed that to be the case?

4

5

A I believed it. Yes. Okay. And the reason I hesitate there, because I really didn't know. Okay. But that was the only possibility I had that made sense.

6

7

8

Q All right. But you had taken -- you had affirmatively, at least held that thought?

9

10

A Yes.

11

JUDGE SMITH: Ms. Bernabei.

12

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MR. MC BRIDE: Judge Smith, this may be a little bit irregular but I wonder if I could ask the witness to relate one other area? And the reason I do this is not -- and, again we had this conversation last week -- because I have standing to have any interest in the record but because in prior interviews there has been the suggestion, and it may have been an inference or two along the way here today, and on Wednesday, that the witness may not have satisfied any legal obligation that he had to report what he knew that day, I wonder if we could go into one area about his conversations with those personnel of the NRC who were present in the control room to alleviate my concern in that area?

JUDGE SMITH: Do you -- if you feel that is

#14-3-SueT 1 necessary. I don't recall any implication that he failed  
2 in his duty to report. There was a line of questioning  
3 about him being the licensed operator; is that what you  
4 are alluding to?

5 MR. MC BRIDE: It's not just -- and I'm not  
6 alluding to any specific questions that any party has asked  
7 thus far, but the implication has been left throughout  
8 prior interviews as well as perhaps an inference or two  
9 from questions during these hearings that this gentleman  
10 and perhaps others as well didn't somehow satisfy their  
11 obligations.

12 And I thought there was one incident that the  
13 witness might be able to relate to you that might assist  
14 in that regard. But if you think it's improper, I won't  
15 go into it.

16 (The Board members are conferring.)

17 JUDGE SMITH: Are there any objections?

18 (No reply.)

19 All right.

20 REDIRECT EXAMINATION

21 BY MR. MC BRIDE:

INDEXXX 22 Q Mr. Chwastyk, when you arrived at the control  
23 room on March 28th, 1979, were there or were there not  
24 personnel of the Nuclear Regulatory Commission present in  
25 the control room?

#14-4-SueT1

2 A There were two present in the control room that  
I recall.

3 Q Did you have occasion throughout the balance  
4 of that day and into the next morning to have conversations  
5 with those two gentlemen?

6 A Yes. As a matter of fact, they -- one of them  
7 would follow me everywhere I went, and I remember the  
8 one incident where I decided to change my direction, I  
9 turned around and bumped into him. And I had to ask him  
10 to give me a little bit more elbow room.

11 But they did -- in fact, every place I went  
12 they were right with me. And we would discuss when I had  
13 the time, you know, whatever actions we were taking.

14 MR. MC BRIDE: That's all I have, Judge Smith.  
15 Thank you.

16 MS. BERNABEI: This is a follow-up question.

17 RE CROSS EXAMINATION

18 BY MS. BERNABEI:

19 Q Mr. Blake asked you whether you knew of any  
20 withholding, either by yourself or your fellow personnel,  
21 on the day of the accident, withholding of information from  
22 the NRC.

23 Did you base your answer of no on the fact that  
24 you and the others informed the NRC inspectors in the control  
25 room at the time of what was going on?

INDEXX

#14-5-SueT

1

A Yes.

2

Q You perhaps went over this with Judge Linenberger, but let me ask you to clarify.

3

4

You took over the console from Mr. Zewe, is that correct, at a certain point, about an hour, an hour and a half after you came in?

5

6

7

A That's correct, yes.

8

Q And that was about 12:30 or one o'clock?

9

A Somewhere in the area of 12 to one o'clock.

10

Q What were your duties when you took over the console in terms of directing the control room operators or other functions?

11

12

13

A Well, my duties were, in fact, to oversee the operation of the operators from the console and plus the operators out in the plant. But also at that time, of course, I had direction to maintain the status quo of the plant at that time.

14

15

16

17

18

Q So, is it fair to say you had functional responsibility for operations in Unit 2 at that time?

19

20

A Yes.

21

Q Now, in response to a number of questions from Mr. Blake, you talked about wishing to draw a bubble in the pressurizer to get the reactor in a condition that you would understand.

22

23

24

25

And I think another time you referred to as

#14-6-SueT 1

understanding where the plant was. Is that correct?

2

A That's correct. Yes.

3

Q Now, is it fair to say that your desire to do

4

this was part of an overall desire to bring the plant to a

5

stable condition; is that correct? To stabilize the

6

reactor at that time?

7

A To stabilize it in a more recognizable condition

8

that we, you know, as operators of the plant could recognize,

9

yes.

10

Q Okay. And if you could, describe for us what

11

other steps other than drawing the bubble in the pressurizer

12

in your mind were involved in bringing the reactor to a

13

stable condition which you could understand?

14

A Well, it would have involved drawing the bubble,

15

circulating water either with the reactor coolant pump or

16

natural circulation, and providing a heat sink to remove

17

the heat from the core.

18

Q So, when you talk about your desire, your goal,

19

in drawing a bubble in the pressurizer you are talking

20

about all three of these actions eventually?

21

Is that fair to say?

22

A Yes. Yes.

23

JUDGE SMITH: Well, one of them is an alternative.

24

Natural circulation compared to forced circulation.

25

WITNESS CHWASTYK: Yes, right. Yes. I'm sorry.

#14-7-SueT

1 I meant three as a -- three individual steps, if you will.

2 BY MS. BERNABEI: (Continuing)

3 Q Okay. And drawing the bubble was really only  
4 one of the three; is that correct?

5 A Yes.

6 Q Okay. You were asked some questions about  
7 whether or not closing the block valve in and of itself  
8 would repressurize the system.

9 It's fair to say that's the necessary or  
10 essential step to repressurizing the system, is it not?

11 A Yes.

12 Q And it's fair to say that the block valve would  
13 not be closed on the day of the accident without some  
14 thought or consideration being given to that step?

15 This harkens back to a conversation or discussion  
16 we had prior to your testimony. That wouldn't be something  
17 that site personnel would have undertaken without considera-  
18 tion or forethought on March 28th, would it?

19 A No, I would say not.

20 Q Okay. And, in fact, the step of drawing the  
21 bubble in the pressurizer and, in fact, starting to re-  
22 pressurize the system was a dramatic change from what had  
23 gone on prior to that time; is that fair to say?

24 A Well, it was a change. I don't know if it was  
25 dramatic.

#14-8-SueT 1 Q Well, do you remembering testifying in prior  
2 testimony that it was quite a change, a dramatic change,  
3 from what had gone on before?

4 A I don't recall using those terms, dramatic.

5 Q Okay. It was a change; that's fair to say?

6 A Yes.

7 Q Now, it's also fair to say that there was a  
8 concern early in the accident that if the block valve were  
9 closed it might stick close. That is, out of some equipment  
10 failure or problem it might stick close.

11 Was there some concern expressed on March 28th  
12 about that? I'm talking about early in the accident,  
13 before you got there.

14 A Then, I couldn't answer that.

15 Q You don't know about that?

16 A No, I don't know about that.

17 Q In response to one of Mr. Blake's questions, he  
18 referred you to a discussion in one of your interviews  
19 about your regret, or I think you said you kicked yourself  
20 for not thinking about an instruction not to activate  
21 certain equipment.

22 Do you remember the portion of your testimony  
23 to which I am referring?

24 A Yes, I do.

25 Q Okay. And I think it was your testimony that

#14-10-SueT

1 wasn't an explosion or burn as a result of starting those  
2 pumps so whatever -- nothing happened, so that whatever  
3 hydrogen or whatever gas had been there had already burned  
4 off?

5 A That's correct, yes.

6 Q Okay. And this conversation occurred on March  
7 28th; is that correct?

8 A Yes.

9 Q Okay. And it was your understanding that Mr.  
10 Mehler had either directed or himself tested the lift and  
11 back stop pumps in order to prepare for starting the  
12 reactor coolant pump?

13 A That's correct, yes.

14 Q Now, if you know, was it the usual course of  
15 business to record in a control room log the testing or  
16 activation of the lift and back stop pumps to the reactor  
17 coolant pump?

18 A Under normal operation, yes.

19 MS. BERNABEI: Okay. I would like to mark as  
20 TMIA Exhibit 16 what has been identified as a control room  
21 log for March 28th.

22 (The document referred to  
23 above is marked as TMIA  
24 Exhibit Number 16 for  
25 Identification.)



#14-9-SueT 1

2 at that point you were talking about the second instruction  
3 not to activate electrical equipment given on March 28th;  
4 is that correct?

5 That is, the instruction not to activate  
6 electrical equipment above and beyond the PORV or block  
7 valve?

8 A That was -- I don't know if you could say it  
9 was the second one. The first one was, you know, the  
10 instruction I gave to the operators not to operate the  
11 block valve without my approval.

12 Q Right. And I'm talking about the one where you  
13 say you kicked yourself for not thinking about it your-  
14 self. That was separate and apart from the --

15 A Yes.

16 Q -- that instruction?

17 A Yes, it was. Yes, it was.

18 Q And this one second and apart was an instruction  
19 given by Mr. Miller; is that correct?

20 A I don't recall if that was Mr. Miller or not.

21 Q Okay. Do you remember any conversation that  
22 ensued with Mr. Mehler concerning this instruction? That  
23 is, Mr. Mehler stating in substance or effect: Well, I've  
24 already started some lift and back stop pumps?

25 A Yes. I do.

Q Okay. And he indicated, did he not, that there

#14-11-SueT1

(The document is being distributed to the Board members and all parties, including the Court Reporter.)

BY MS. BERNABEI: (Continuing)

Q Okay. Specifically, I --

A Wait.

(The witness is looking at TMIA Exhibit Number 16 for Identification.)

Q Okay. Mr. Chwastyk, if I could refer you to Page 2, specifically the entry in the 7 p.m. time frame, or 1900 time frame, could you determine whether or not there is any entry for testing or activation of the lift or back stop pump prior to starting the reactor coolant pump that evening on March 28th?

MR. BLAKE: Excuse me. Before Mr. Chwastyk answers that question, what is counsel's reference to the fact that this document is a log of 3/28?

As I read through it, I see 3/29s, 3/30s, and other dates and times.

MS. BERNABEI: That's true. It starts at 3/20 and continues I believe through the early morning hours of April 1st.

I am proposing this be one exhibit since we will question subsequent witnesses on it. So, for ease of reference I have included it as one exhibit; that is,

#14-12-SueT 1

both the 3/28 portion and the other portions.

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MR. BLAKE: Well, it may be that this will be appropriate for subsequent witnesses but I think a first question of Mr. Chwastyk with regard to this document ought to be whether he is familiar with it or played a hand in preparing the document before he is asked questions about it now.

8

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11

MS. BERNABEI: I think we will have other testimony about who prepared this and the circumstances under which it is prepared.

12

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I can represent that Mr. Illjes will testify as to its authenticity, his participation in writing the specific entries I am talking about, and that it was written in the normal course of business; that is, maintained as a log in the control room.

16

17

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20

I don't think Mr. Chwastyk has to be familiar with the document. We aren't going to try to introduce it through him. I just want him to refer to it to determine whether there is a notation about the testing of the lift or back stop pumps on March 28th.

21

22

MR. BLAKE: I have one additional question for counsel, and that is what is this follow-up to?

23

24

25

MS. BERNABEI: It's his testimony that there was a conversation with Brian Mehler in which Brian Mehler stated that he had activated back stop and lift pumps.

#14-13-SueT

1 MR. BLAKE: Right. And that's the question that  
2 you just asked. My question now is, what is this follow up  
3 to? Why are we having this question now?

4 MS. BERNABEI: I will start over again.

5 MR. BLAKE: I recall no one --

6 MS. BERNABEI: Mr. Blake asked --

7 MR. BLAKE: -- asking the questions --

8 MS. BERNABEI: Mr. Blake, if you will let me  
9 explain I would answer the question.

10 MR. BLAKE: Please.

11 MS. BERNABEI: I understand your objection is  
12 this is not proper redirect. This is a follow-up to your  
13 questions about a portion of Mr. Chwastyk's testimony  
14 concerning a direction which he could kick himself, he says,  
15 for not thinking of himself. I attempted to draw what that  
16 direction was and the context of that direction.

17 And this is appropriate, given that you opened  
18 up this area of what was this instruction.

19 This is basically my last question on this  
20 line.

21 JUDGE SMITH: There is no objection.

22 MS. BERNABEI: Okay.

23 BY MS. BERNABEI: (Continuing)

24 Q Mr. Chwastyk, can you answer the question?

25 A There is an entry here at 1917, started RC-P 1A

#14-14-SueT 1

DC lift pump.

2

Q Now, if I'm correct, that's one of the lift pumps that was started prior to starting the reactor coolant pump on the evening of March 28th?

3

4

5

A That's correct. Yes.

6

Q Are you familiar with TMIA Exhibit 16? Have you seen the document prior to this hearing?

7

8

A This document?

9

Q That's right.

10

A No, I've never seen this document before.

11

Q Okay. It --

12

JUDGE SMITH: Excuse me. Could I inquire, is a lift pump sort of a priming pump? Is that what it does?

13

14

WITNESS CHWASTYK: No. It's -- what it does is lift the shaft on the reactor coolant pump, okay, to allow easier start, less torque.

15

16

17

BY MS. BERNABEI: (Continuing)

18

Q Is it fair to say a lift pump is a preliminary step to starting the reactor coolant pump; is that correct?

19

20

A Yes, that's correct.

21

Q And if I understand correctly, the lift and back stop pumps are -- remain activated until some time after the reactor coolant pump is started up?

22

23

24

A That's correct, yes.

25

Sim 15-1

1 Q In discussing in response to Mr. Blake's questions  
2 of your conversation with Mr. Miller I believe you testified  
3 you believed he was preoccupied, somewhat preoccupied at the  
4 time you were speaking to him about the pressure spike?

5 A Yes.

6 Q Now it is also your testimony, however, that you  
7 believe he looked specifically at the pressure recorder for  
8 the pressure spike?

9 A He was in that general area and I made the  
10 assumption he was looking at the pressure, yes.

11 Q Okay. In fact, I think in prior testimony you  
12 stated that you were fairly certain that he was looking at  
13 the strip chart recorder to verify the pressure spike. Is  
14 that a fair characterization?

15 A It is a fair characterization that he was standing  
16 in front of it. Now I can't say what he was seeing and  
17 what was being registered, you know.

18 Q But that was certainly your impression at the  
19 time?

20 A Yes.

21 Q Now I think you also stated that you traveled  
22 with Mr. Miller to look at the secondary plant side indicators;  
23 is that correct?

24 A Yes.

25 Q Now one of those would be the steam generator

Sim 15-2 1 pressure indicators; is that correct?

2 A It may have been. We were just standing in  
3 front of the secondary, on the right console of Exhibit 1.

4 Q Okay. Now on the secondary pressure -- excuse me,  
5 the secondary site pressure recorders or the steam generator  
6 pressure recorders would show a coincident downward spike  
7 in pressure at the time of the reactor building spike upward;  
8 is that correct?

9 A That is correct only in the sense that the trans-  
10 mitters themselves are located inside the building.

11 Q Okay. And they work off of or in opposition to  
12 the reactor building pressure; is that correct?

13 A Again, I don't recall the actual type of trans-  
14 mitters we had, but they would be sensitive to some degree  
15 to the reactor building pressure. I just couldn't tell you  
16 how much.

17 Q Okay. Do you know if a check was made of the  
18 steam generator pressures after the pressure spike in the  
19 reactor building?

20 A I attempted to check all possible parameters. I  
21 don't recall specifically steam generator pressures.

22 Q If I state that in your prior testimony you have  
23 mentioed that that was one of the parameters that was checked,  
24 you would have no argument with that?

25 A No, I wouldn't.

Sim 15-3

1 Q Okay. I would like to refer you to Figure TH-5,  
2 which is steam pressure for Loop A in the final Nuclear  
3 Safety Analysis Center Report dated March 1980.

4 For the record, that is a recording of the  
5 steam generator pressure in Loop A, including the time of  
6 the pressure spike.

7 MR. BLAKE: This not one of the two prior NSAC  
8 stipulated documents but this is the third?

9 MS. BERNABEI: Right, and this is the only copy,  
10 your copy. I don't believe this appears in any of the other  
11 editions.

12 BY MS. BERNABEI:

13 Q Mr. Chwastyk, if you would, I would like you to  
14 look at the chart at the time of the pressure spike, which  
15 is shortly before 10 hours into the accident.

16 MR. BLAKE: What figure are you looking at?

17 MS. BERNABEI: Figure TH-5.

18 (Pause.)

19 THE WITNESS: Okay, I see it.

20 BY MS. BERNABEI:

21 Q And it does indicate, does it not, a spike down-  
22 ward in pressure at the time of this pressure spike at 1:50 p.m.?

23 A At ten hours?

24 Q Shortly before 10 hours.

25 A I can't see it.



Sim 15-4

1 Q If I represent that the time line at the bottom  
2 is the time into the accident, that is the time of the  
3 initiating event at 4 a.m., and Mr. Blake can correct me if he  
4 has a different understanding, it would indicate a downward  
5 spike in pressure shortly before 10 hours into the accident,  
6 that is 2 p.m.; is that correct?

7 A Yes, that is correct.

8 JUDGE SMITH: Shortly before the what?

9 MS. BERNABEI: The initiating event at 4 a.m.  
10 Oh, excuse me, shortly before 10 hours into the initiating  
11 event at 2 p.m.

12 JUDGE SMITH: Okay. That was what your answer  
13 referred to?

14 THE WITNESS: Yes.

15 BY MS. BERNABEI:

16 Q Now it is also true, is it not, that you directed  
17 a check or there was checked a reactor coolant system pressure  
18 recorder shortly after the pressure spike?

19 A Again, I don't remember it specifically, but, you  
20 know, we did make an attempt to check any possible source of  
21 pressure in the reactor building.

22 Q Now, if you remember, where was the reactor  
23 coolant system pressure indicator located on the console?

24 A I hate to say this, but I have forgotten.

25 Q Would it be with the reactor building pressure

Sim 15-5

1 strip chart?

2 A It could very well be. I just don't recall where  
3 it is at.

4 Q Okay. Would you like to look at the Licensee  
5 Exhibit 1.

6 (Pause.)

7 A You did ask reactor coolant system pressure, right?

8 Q That is right.

9 A Okay. I still don't know.

10 Q Okay. Now it is fair to say that it would show  
11 a coincident downward spike at the time of the upward spike  
12 in the reactor building?

13 A Again, I don't really know. It may have, but it  
14 would depend on the type of transmitter, and I have just  
15 forgotten.

16 Q Okay. But technically that is what would occur,  
17 whether or not it would be recorded in an intelligible way ---

18 A Well, technically only if it had the type of  
19 transmitter that was affected by the atmospheric conditions  
20 in which it sits. There are pressure transmitters that are  
21 not affected by way. I don't think we had them at the island,  
22 but I just don't recall what they were. So I can't say.

23 Q Maybe we are talking about two different things.  
24 I am asking you whether in fact the reactor coolant system  
25 pressure would decrease in an amount consistent with the

Sim 15-6

1 reactor building pressure increase?

2 A And I am simply saying I don't know about -- you  
3 know, it has been too long.

4 JUDGE LINENBERGER: Ms. Bernabei, I am not quite  
5 sure that you and the witness are on the same wavelength. I  
6 think you are asking technically independent of what kinds  
7 of transducers one has in the system would you expect a  
8 pressure decrease in the reactor coolant system concurrent  
9 with the containment building pressure increase independent  
10 of what kind of transducers might be used, and technically  
11 would you expect that.

12 MS. BERNABEI: That is exactly right. Thank you.

13 JUDGE LINENBERGER: I am not sure the witness  
14 heard it that way.

15 THE WITNESS: That is not what I understood the  
16 question to be. I am sorry.

17 BY MS. BERNABEI:

18 Q Okay. Well, given that clarification.

19 A I guess my answer would be no.

20 Q Isn't it a fact that the reactor coolant system  
21 pressure is in fact worked off of or opposite to in some sense  
22 the reactor building pressure; that is, that to the degree  
23 the reactor building pressure increases, the reactor coolant  
24 system pressure will decrease in an equal amount?

25 (No response.)

Sim 15-7

1 MS. BERNABEI: Well, that is okay.

2 THE WITNESS: I guess I am not understanding  
3 the question.

4 MS. BERNABEI: I will withdraw the question.

5 BY MS. BERNABEI:

6 Q You made a distinction in some of your testimony  
7 about your conversations with the operators who came on  
8 shift in the afternoon period and your discussions with them  
9 and your discussions about the basis of your understanding  
10 of the cause of the spike and your discussions with Gary  
11 Miller and Brian Mehler; is that correct?

12 A Yes.

13 Q And if I understand correctly, you said that  
14 any operators coming on shift you believe you explained  
15 specifically your understanding of the cause, that is, that  
16 it was hydrogen and it was caused by an explosion?

17 A Yes.

18 Q Okay. And I think it was your testimony that  
19 you didn't feel the need to do that with respect to Mr. Miller  
20 and Mr. Mehler because you believed they understood the  
21 basis or the cause of the spike in your discussions with  
22 them?

23 A I made the assumption possibly that they did,  
24 yes.

25 Q And so that therefore you did not feel it was

Sim 15-8

1 necessary to explain in detail or with the depth the cause  
2 of the pressure spike as you explained it to the control room  
3 operators with obviously less experience than yourself,  
4 Mr. Mehler or Mr. Miller. Is that a fair understanding of  
5 how you were thinking about it at that time?

6 A I really don't know. I can't answer that.

7 Q But at least in your own mind you did make a  
8 distinction about the control room operators coming on shift  
9 and Mr. Miller in terms of what you needed to explain to them?

10 A I know I made the assumption, or may have made  
11 the assumption with Mr. Miller and I did not make that  
12 assumption with the operators.

13 Q And just to make sure I understand, it is because  
14 of Mr. Miller's obvious additional experience and knowledge  
15 that you made such an assumption?

16 A That may be. I really don't know.

17 Q As to one of Judge Linenberger's questions you  
18 mentioned that you thought it was possible and that it was  
19 possibly done on occasion that an operator would remove the  
20 paper -- not remove the paper, but lift up the paper on the  
21 pressure recorder to look at a certain recording that was  
22 made?

23 A Yes.

24 Q Okay. Now was that done as a usual course of  
25 business? I guess what I am saying is was that done in the

Sim 15-9 1 usual course of events frequently?

2 A Well, again, as I answered before, only if you  
3 wanted to see what that parameter was measuring some period  
4 of time previous to where you were at at the time you wanted  
5 to look at it.

6 Q Now, to your knowledge, was that done at any  
7 time on March 28th?

8 A I can't answer that. I don't recall it  
9 specifically, but it wouldn't surprise me if it wasn't.

10 Q Now in your experience has the pressure or the  
11 strip chart ever been cut in order to remove a portion of it  
12 from the recorder?

13 A Yes.

14 Q And when has that been done? What has been the  
15 purpose of reason for doing that?

16 A Usually to analyze a situation, you know, for  
17 instance, after a reactor trip or something like that when  
18 we wanted to analyze the information we had.

19 Q Now, to your knowledge, was the pressure recorder  
20 or, excuse me, the strip recorder for the time of the pressure  
21 chart ever cut from the chart itself?

22 A I don't know.

23 Q Okay. It is a fact, if is not, that in the normal  
24 course of business site personnel would have allowed the  
25 paper to run through the recorder and would not in fact cut

Sim 15-10

1 the strip chart at any point? In other words, the paper  
2 would run to the end and another roll could be inserted?

3 A Yes. Under normal situations, yes.

4 Q Okay. So other than perhaps cutting it in order  
5 to analyze a trip or a transient, to your knowledge, the  
6 strip chart would not normally be cut?

7 A No.

8 Q I believe in answer to one of Mr. Goldberg's  
9 questions -- there is a question about how long it might  
10 take in an hour or so after the pressure spike in order to  
11 close the block valve. And I think you said well, perhaps  
12 under the circumstances at the plant on March 28th it could  
13 be attributable to the time needed to check out the pressurizer  
14 heaters. Do you remember some answer in that ---

15 A Yes.

16 Q What did you mean by checking out the pressurizer  
17 heaters, what is involved in that?

18 A Well, it was just, you know, verifying that they  
19 would in fact work or were working. Now what is involved  
20 in that I can't say right now. It could have been a number  
21 of things.

22 Q Okay. And in your mind that could have taken  
23 as long as an hour or so?

24 A That is possible.

25 Q You were asked I think several times whether or

Sim 15-11

1 not you talked to Mr. Herbein either about the pressure  
2 spike or about hydrogen, and I think in answer to both  
3 questions you said you don't remember any such conversation.  
4 Is that correct?

5 A That is correct.

6 Q Now you were talking on March 28th with  
7 Mr. Herbein over a public radio or radio communications;  
8 is that correct?

9 A That is correct.

10 Q And your understanding was that Mr. Herbein was  
11 in the observation center and the communication was between  
12 the observation center and the Unit 2 control room?

13 A That is correct.

14 Q Now one of your concerns in terms of not discussing  
15 hydrogen with Mr. Herbein was, was it not, that this was  
16 a public radio open to monitoring by the general public?

17 A That would have been a concern, and I believe I  
18 expressed that concern in my deposition. But again, since  
19 reading my previous depositions, I don't think that was the  
20 reason I didn't discuss it with Mr. Herbein.

21 Q Okay. What was the reason you didn't discuss it  
22 with Mr. Herbein?

23 A Because we were already far enough along into  
24 our recovery that the initiating event that allowed us to  
25 start it was no longer important.



1 Q And could another reason be that you believe  
2 Mr. Herbein had been briefed about the status of the reactor  
3 prior to discussing or giving your direction on recovering  
4 the reactor?

5 MR. BLAKE: Excuse me. Could you repeat that  
6 question?

7 MS. BERNABEI: Certainly. I will rephrase it.

8 BY MS. BERNABEI:

9 Q Was another reason that you did not talk to  
10 Mr. Herbein over the radio about hydrogen, was another reason  
11 that you believed he understood either from Mr. Miller or  
12 by some other means what the status of the reactor was at  
13 that time?

14 A No, I don't believe so. I think it was simply  
15 because this was like three hours after the pressure spike  
16 and we had already at that time had indication that our  
17 T hots were coming down. I had no reason to even discuss,  
18 you know, the pressure spike or the hydrogen with Mr. Herbein  
19 at that time.

20 Q Has GPU or Metropolitan Edison ever interviewed  
21 you in any internal investigations the company has conducted  
22 as to interpretation of the pressure spike on the day of the  
23 accident?

24 A Who was that again?

25 Q General Public Utilities or Metropolitan Edison?

Sim 15-13

1 A Not, not that I know of.

2 Q You were never included in any internal investiga-  
3 tion conducted by the company or ever interviewed?

4 A No.

5 Q Do you know of any reason for that?

6 A No.

7 MS. BERNABEI: I have no other questions.

8 JUDGE SMITH: There was an exchange between you  
9 and Ms. Bernabei that I would like to have clarified. There  
10 was a reference to a change in your efforts after the  
11 pressure spike, and the question was did it constitute a  
12 dramatic change, and I am paraphrasing, your efforts to  
13 draw a bubble and to repressurize, and you said well, no,  
14 not a dramatic change. Question, well, was it a change?  
15 Answer, yes.

16 I understood you throughout to decline to call  
17 your efforts following the pressure spike a repressurization  
18 effort, but really an effort to draw a bubble and get back  
19 to a familiar mode. But your answer to Ms. Bernabei seemed  
20 to suggest that you did make a specific change to an effort  
21 to draw a bubble and to repressurize.

22 Was that your intention?

23 THE WITNESS: No. To draw the bubble was the  
24 purpose.

25 JUDGE SMITH: Have I mischaracterized your question?

15-14

1 MS. BERNABEI: I think this is really a matter  
2 of semantics. Let me ask Mr. Chwastyk a couple more  
3 questions because maybe this will clarify along the line  
4 of what you are suggesting.

5 CROSS-EXAMINATION (Continued)

6 BY MS. BERNABEI:

7 Q Is it fair to say that drawing the bubble in  
8 the pressurizer was one step in a repressurization strategy?

9 A No, I don't see that.

10 Q It is one step in repressurizing, is it not,  
11 that is closing the block valve -- well, let me ask the  
12 question a different way.

13 Closing the block valve and drawing a bubble  
14 in the pressurizer ceases any depressurization in the system?

15 A Yes.

16 Q And it is fair to say that closing the block valve  
17 is a necessary step toward repressurizing the system?

18 A Well ---

19 JUDGE SMITH: You have examined him extensively  
20 on that point, and I think he has expressed himself, but  
21 this seemed to be an anomalous answer in consideration of  
22 his other answers, and I am wondering if the question was  
23 intended the way I heard it, and I just wondered if the  
24 answer was intended the way I heard it.

25 MS. BERNABEI: Let me just refer to one point

15-15 1 in the deposition.  
2 (Pause.)  
3 There is a point in his deposition I am looking  
4 at, but I think it is already in the record. So I don't have  
5 any problem. I will just withdraw the question.

end Sim 6 (Pause.)

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1 Q Mr. Chwastyk, this question has been put to you  
2 in its parts many times, but it has not been put to you  
3 directly, and the Board felt that the record might be more  
4 complete if this question were directly posed.

5 You have testified in general that some time on  
6 the 28th, after the pressure spike, you inferred that it was  
7 a consequence of hydrogen combusting, which was generated by  
8 a zirc water reaction in the reactor vessel.

9 Now, having made that determination and as you  
10 state, you have communicated either the entire thought or  
11 portions of that thought to various people in the control  
12 room and outside the control room on that date.

13 Do you have any reason to believe that your  
14 conclusion, that your thoughts on that, were communicated to  
15 Mr. Dieckamp?

16 A No, I don't. I don't even know where Mr. Dieckamp  
17 was that day.

18 Q Okay. I don't limit the question to that day.  
19 To any time let's say prior to May 9th?

20 A I have no reason to believe that he knew anything  
21 about what my thoughts were at the time.

22 Q I am not asking for so much as an opinion or  
23 speculation or anything, but are you aware of any chain of  
24 events which would have brought your thoughts to Mr. Dieckamp  
25 in the time period that I am talking about?

1 A No, I don't.

2 Q Are you finished?

3 (No response)

4 Mr. Au?

5 RECROSS EXAMINATION

6 BY MR. AU:

7 Q Do you know if others in the control room at the  
8 time of the pressure spike were interviewed by GPU or  
9 Metropolitan Edison about the events of March 28th?

10 A I don't know.

11 MR. AU: Okay. I have no other questions.

12 JUDGE SMITH: Mr. Goldberg?

13 RECROSS EXAMINATION

14 BY MR. GOLDBERG:

15 Q Yes, one brief line. Mr. Chwastyk, earlier today  
16 I asked you a series of questions about your conversation  
17 with Mr. Miller, and your stating to Mr. Miller your belief  
18 that the pressure spike was real, and then a number of questions  
19 about certain things which you didn't tell Mr. Miller.

20 And I think when we finished that the record was  
21 clear, and then in response to a question by Mr. Blake there  
22 has been some additional confusion in the state of the record  
23 on this one point. So I would like to ask you a couple of  
24 brief questions again.

25 As I understand your testimony today, you don't

XXX INDEX

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1 recall discussing with Mr. Miller hydrogen.

2 A That is correct.

3 Q And you don't recall discussing with Mr. Miller  
4 an explosion?

5 A That is correct.

6 Q And you don't recall discussing with Mr. Miller  
7 core damage?

8 A Go back to the explosion.

9 Q Okay.

10 A I am not certain about the explosion, because  
11 the reason I say that, I think I discussed with Mr. Miller  
12 the fact of putting the simultaneous operation of the valve  
13 and the pressure spike together, which indicates an explosion  
14 of some sort. But I don't really recall it.

15 Q Okay. It is possible, but you don't recall  
16 specifically?

17 A That is right.

18 MR. GOLDBERG: Okay. Thank you.

19 JUDGE SMITH: Any further questions? Mr. Blake?

20 MR. BLAKE: Yes, prompted by Ms. Bernabei's  
21 questions.

22 RE-CROSS EXAMINATION

23 BY MR. BLAKE:

24 Q Ms. Bernabei referred you to a chart out of the  
25 NSAC report. Not the log that you have in front of you,

1 but rather a chart of steam generator pressure --

2 A Yes, I recall.

3 Q Do you recognize that trace?

4 A No, I don't.

5 Q Do you know whether there is any such recorder  
6 of such a trace in the control room?

7 A Not that specifically. There is a steam generator  
8 pressure recorder, I believe, but I am not certain.

9 Q Is that an instantaneous recorder of pressure in  
10 the steam generator which you re now referring?

11 A Yes.

12 Q But there is no chart that you recall in the  
13 control room?

14 A I don't recall if there is a chart or not. And  
15 I think that is what I said previously.

16 Q You were asked several questions regarding the  
17 reactor building or containment building pressure recorder  
18 and the ability to look at that chart, and the ability to  
19 cut it.

20 A Yes.

21 Q In your view, if that chart were cut, pulled out  
22 and cut, would there be an indication of some sort on the  
23 chart that something had taken place?

24 A Yes, it should have been properly dated and timed  
25 and a brief explanation of why it was replaced and cut and



1 that type of thing.

2 Q And if there were no such specific or explicit  
3 written notation on the chart, and it were done, would  
4 there still be an indication on the chart itself, that is  
5 the remaining chart by virtue of the pen recorders, or any  
6 other reason, would there be some indication that this had  
7 taken place?

8 Could you accomplish this cutting, pulling out  
9 the paper and cutting it, without in your view having some  
10 aberration show up in the pen tracing?

11 A Well, the cut would have to show up. The pen  
12 traces would have to show up. You mean you cut it, and then  
13 put it back together, and put it back in and reuse it?

14 Q That is right. Would you be able to determine  
15 other than by the cut itself that something had occurred to  
16 the machine at the time it was cut?

17 A Yes. You should be able to unless, you know --  
18 when you pull the paper out it is going to stop printing, and  
19 when you put it back in it is going to start printing again,  
20 and you should see that change, as a step change possibly,  
21 or whoever did it would have to be almost exact in putting  
22 the pen right back in the same time frame, but he couldn't get  
23 it right back in the same pressure.

24 Q And in addition, after you had cut it and looked  
25 at it or done whatever you were going to do, you would then

1       retape it and put it back onto the return spool?

2           A     No, normally we would not do that. We would take  
3       it off, take the section that we wanted and make a copy of it,  
4       and replace the paper, and then mark this one and put it into  
5       the file.

6           Q     You would replace the initial supply spool as well  
7       at the same time?

8           A     Yes. In other words, change out the paper, start  
9       with another one, and take the old one and copy it and do  
10      whatever you wanted to do with it, and put it in the file.

11          Q     Can you envision someone pulling the spool out,  
12      cutting it, putting it back -- taping it, putting it back  
13      on, without making a notation on the chart?

14          A     No.

15          Q     In response to Judge Smith's question about  
16      whether or not you affirmatively made a determination as a  
17      result of the pressure spike regarding core damage, I under-  
18      stood your answer to be, 'yes.'

19                    Can you explain that in view of your answer to  
20      Ms. Bernabei's question last Wednesday -- do you have a copy  
21      of last Wednesday's transcript? I am looking at pages  
22      29,192, carrying over to the top of 29,193.

23                    I misattributed the questioner. It was Mr.  
24      Goldberg.

25                    MS. BERNABEI: Thank you.

1 MR. McBRIDE: Could you just restate what  
2 question you are asking him to contrast this to?

3 MR. BLAKE: I am asking him how -- to just explain  
4 his answer to Judge Smith in view of his answer last Wednesday  
5 to Mr. Goldberg's question about his assessment of core  
6 damage, appreciation of core damage as a result of the  
7 spike.

8 JUDGE SMITH: What pages again, please?

9 MR. BLAKE: 29,192, the question which starts  
10 at line 18 on that page, and the answer carries over to the  
11 top of the next page.

12 BY MR. BLAKE: (Continuing)

13 Q Mr. Chwastyk, my particular reference is to your  
14 statement there: I don't know that I at the time thought  
15 there was any additional core damage.

16 MS. BERNABEI: I think maybe the whole answer  
17 should be read into the record.

18 MR. BLAKE: The additional --

19 JUDGE SMITH: I don't recall any question that  
20 I asked that this is germane to.

21 WITNESS: I am mixed up here. I don't either.

22 JUDGE SMITH: The question I asked, several times  
23 I have read in his deposition and in his examination at this  
24 hearing, an answer to the effect that: I knew that there  
25 was no other cause -- no other source of explosive material.

1 Stopping short of coming to: Therefore, I knew it must be  
2 hydrogen.

3 And I wanted to establish whether or not he  
4 affirmatively believed that there was a hydrogen source for  
5 the explosion. There was hydrogen that was combusted, as  
6 compared to an absence of belief that there was something  
7 else that exploded. You understand that.

8 MR. BLAKE: Yes.

9 JUDGE SMITH: That is how you understood the  
10 question.

11 WITNESS: Yes. Now, I guess I don't know how  
12 to relate that to --

13 MR. BLAKE: It may be that my recollection is  
14 not right, then, with respect to Judge Smith's question.  
15 Maybe it was Judge Linenberger that asked the question  
16 about core damage, or whether or not he assessed it at the  
17 time of the core spike. Am I wrongly attributing it to you,  
18 Judge Linenberger?

19 JUDGE LINENBERGER: I did ask such a question.  
20 I don't see that the witness' answer is in conflict with  
21 the testimony in this transcript.

22 JUDGE SMITH: Mr. Blake, I think I know what  
23 happened. I may have interrupted a line of questioning on  
24 your part. Ms. Bernabei objected on vagueness. I said well  
25 if it is vague, the witness can tell us, but you could have

1 objected upon the basis of asked and answered, and I said  
2 haven't you several times said that before the pressure  
3 spike you had neither quantified nor qualified the extent  
4 that you believed that there was core damage because you  
5 had preferred to treat the plant symptomatically, so you had  
6 not had a quantity of core damage in mind before the pressure  
7 spike.

8 But after the pressure spike, it no longer was  
9 a secondary consideration to him. He regarded it as a  
10 matter of some substance. But there was no quantification  
11 of the core damage or qualification of it before the pressure  
12 spike. And he agreed that that was the substance of his  
13 testimony.

14 Perhaps that is what prompted your question.

15 MR. BLAKE: I had a sense that I thought it was  
16 in response to the Board's questions, that he thought there  
17 was additional core damage as a result of the pressure spike,  
18 and when I read -- what I asked him is what is the difference  
19 between that answer and this one where he says: I don't know  
20 that I at the time thought there was any additional core  
21 damage.

22 JUDGE SMITH: You are right; I think you are  
23 right.

24 (Board confers)

25 I have the uneasy feeling that

1 something is unresolved here. I don't know what to do  
2 about it.

3 I think that I have understood his testimony,  
4 but now I am not so sure. Well, notwithstanding what you  
5 said before could you describe how you viewed your  
6 concept of core damage after the spike, compared with before  
7 the spike?

8 WITNESS: Okay. Before the spike, I did not  
9 quantify or qualify my thoughts on core damage. I assumed  
10 there was some, but I didn't do anything further with it.

11 After the pressure spike, I realized that my  
12 thoughts about core damage before the pressure spike were  
13 probably erroneous, and probably core damage was probably  
14 a lot worse than I thought it was.

15 The other part of that was, and this is what I  
16 state in this part of my deposition -- last Wednesday's  
17 29,192 and 193, I also did not know whether or not what we  
18 were doing with the core was sufficient to keep the core  
19 cool, and was not, in fact, causing additional core damage.

20 JUDGE SMITH: Would you repeat that last sentence?

21 WITNESS: What we were doing with the core was  
22 sufficient enough to keep it cool, and therefore not causing  
23 additional core damage.

24 JUDGE SMITH: Is there another thought that may  
25 be expressed here in 192 and 193, and that is, that you did

1 not think that as a consequence of the pressure spike, there  
2 was any additional core damage?

3 WITNESS: I don't think I ever thought that  
4 the pressure spike caused the additional core damage.

5 JUDGE LINENBERGER: I think I can clarify the  
6 thing that is bothering people here.

7 Just a few minutes ago, I questioned this witness  
8 about his state of mind at the time of the occurrence of the  
9 pressure spike and immediately thereafter, and I prefaced my  
10 question in his state of mind immediately thereafter by saying  
11 that we all recognize a plant such as this have many layers  
12 of safety features imposed upon them, and would it not have  
13 been a normal first reaction on his part immediately after  
14 the pressure spike occurred to assume, having determined that  
15 it was a real increase in pressure, to assume that that came  
16 from somewhere else besides core damage, and he said: Yes,  
17 that was the first thing that came to mind immediately after  
18 the pressure spike, and immediately after verifying that it  
19 was a true increase in pressure, the first thing that came  
20 to mind I thought you said was to think through what else  
21 it might be due to rather than to think first of additional  
22 damage.

23 WITNESS: That is correct, yes.

24 JUDGE LINENBERGER: And that is the context in  
25 which I understand this transcript referenced, and in that

1 context I don't find it contradictory with what the witness  
2 said in answer to my question.

3 His first thought was there must be core damage;  
4 what else can cause it? Then upon reflection and putting  
5 things together, the light began to dawn.

6 That is how I interpret what you say.

7 WITNESS: Exactly, with one exception. I didn't  
8 think of core damage initially and just say: Well, if it is  
9 not core damage, let me see what else it is. I tried to  
10 find out what else it was, and when I couldn't find it,  
11 it resolved to core damage.

12 JUDGE LINENBERGER: All right.

13 JUDGE SMITH: Any other questions along this  
14 line?

15 (No response)

16 Are there any other questions at all?

17 MS. BERNABEI: I have two which are very short.

18

19

End 16.  
SueT fols.

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#17-1-SueT 1

JUDGE SMITH: All right.

2

REXCROSS EXAMINATION

3

BY MS. BERNABEI:

INDEXXXX 4

Q Okay. Mr. Blake asked you whether you knew or monitored the steam generator pressure pressures after the spike, and I think your answer is you can't remember?

7

A That's correct.

8

Q Okay. I would like to refer you to your testimony to the NRC on September 3rd (sic), 1980. It's Joint Mailgram Exhibit 117.

10

11

MR. BLAKE: I don't recall asking that question, counsellor.

12

13

MS. BERNABEI: Yeah, I think you did. My understanding was that you asked him whether or not there were -- there was some kind of graphic indication of steam generator pressures and whether or not there was some reference to that on the day of the accident.

16

17

18

That's what I thought the gist of the questioning was about. And I think his knowledge of those on March 28th is relevant.

19

20

21

At least, that was what I was trying to get at.

22

MR. MC BRIDE: Can I just ask, are we all talking about the same thing here? Are we talking about NSAC chart, the fold-out that was pulled out, does that reflect steam generator pressure? Is that --

23

24

25

#17-2-SueT 1

MS. BERNABEI: Right.

2

MR. MC BRIDE: Let me just reflect for the record that his statement is September 4th, 1980. You said the 3rd.

3

4

5

MS. BERNABEI: Okay. I'm reading off the cover. It's incorrect in the transcript. Thank you.

6

7

BY MS. BERNABEI: (Continuing)

8

Q It's Joint Mailgram Exhibit 117, Pages 11 through 12. Doesn't it indicate, Mr. Chwastyk, specifically in your answer on Page 12 that you do remember seeing the steam generator pressures as a result of checks made after the pressure spike on March 28th?

9

10

11

12

13

A (The witness is looking at the document referred to.)

14

15

Well, I indicated that in that deposition of September 4.

16

17

Q Okay. Do you have any reason to believe that answer is incorrect?

18

19

A No, I don't.

20

Q Okay. You were asked some questions about the strip chart recorder and removing a portion of the strip chart from the recorder and what effect that would have on the ongoing recording of pressure.

21

22

23

24

Is it possible to cut a portion of the strip chart that has already passed by the recorder itself, that

25

#17-3-SueT

1 is several hours after the pressure excursion and not disturb  
2 the actual recording of the pressures?

3 A Well, you can do anything.

4 Q If it were done with some care, would it be  
5 possible, would it not, to cut off a portion of the strip  
6 chart several hours after the pressure excursion, perhaps  
7 as many as six hours, ten hours after the pressure excursion,  
8 and not disturb the ongoing recording of reactor building  
9 pressures?

10 A I would have to say no. Because what you would  
11 have to do is you would have to get it back on the take-up  
12 reel, so you would have to cut it, take the one that you  
13 cut off, and take the additional paper, advance it up so  
14 it gets up on the take-up roll --

15 Q And keep it on the take-out role?

16 A Yes. So, you would have to advance the paper  
17 somewhat without --

18 Q Okay. So there would be some anomalies, is  
19 what you are saying? Some anomaly at the point --

20 A Well, it could be -- an anomaly could be just  
21 a straight line, you know, a sudden straight line.  
22 But --

23 Q Okay. But the anomaly would occur, if I'm  
24 correct, at the time when the pressure -- excuse me, the  
25 strip chart was cut; is that correct?

#17-4-Sue T

A Yes.

2

Q Okay. So whatever anomaly occurred would occur at the time on the strip chart when it was cut, not -- at the time it was cut?

3

4

5

A Yes.

6

MS. BERNABEI: Okay. I have no other questions.

7

## BOARD EXAMINATION

8

BY JUDGE SMITH:

INDEXXXX

9

Q Mr. Chwastyk, as you have sat through various interviews that you've had, depositions, and particularly the hearing here on Wednesday and today, what is your feeling as to whether people, and in particular the Board and parties, may be overanalyzing your previous questions and answers and your previous statements and reading too much into an individual statement?

10

11

12

13

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16

Do you have any feeling about that? I'm concerned. I have seen what I think has been a sense of frustration on your part through the time that I've observed you, that you will make a statement and then away we will go with an analysis of it.

17

18

19

20

21

Could you just give us your opinion of how you think that your statements and your testimony has been received as you see it. How it has been reacted to, if I may say that, not received. But how it has been reacted to?

22

23

24

25

A Well, you know, I see a big problem, especially

#17-5-SueT 1 when you go through depositions from five years ago, it's  
2 written down and that's true but there are a lot of things  
3 that are missed in the writing down of the deposition. The  
4 tone of the question, some possible facial expressions.

5 So, when you read it, some of the times I didn't  
6 understand the questions and answers that I read through.  
7 I don't know how you gentlemen can go back and look in that  
8 mind and everybody else's -- all the other people that are  
9 involved in this, looking at their depositions and make  
10 total sense out of it.

11 I'm not sure at this point in time, five and a  
12 half years later, anybody can make total sense out of what  
13 had happened at Three Mile Island on March 28th.

14 I will say from my personal point of view, you  
15 know, I don't know what any further hearings and depositions,  
16 et cetera, are going to prove. But I sure would like to see  
17 them end, because they are getting to be a real pain.

18 Q I can appreciate that. Well, what is your  
19 advice to us today, just from the testimony you gave us?

20 Do you feel that the parties have fairly reacted  
21 to your answers? Or, has there been an overanalysis of  
22 your answers?

23 A I think there has been an overanalysis. You  
24 know, I'm not an attorney by any means, and I basically am  
25 an operator that used the actions rather than words to

#17-6-SueT 1 express himself. And when I get in a place like this and  
2 you are in the realm of the attorney, which are the words,  
3 you know, I become overwhelmed I guess. And when I say a  
4 word that I have a meaning for, it turns out it is taken  
5 wrong by this guy or that guy or that guy or that person  
6 or that person.

7 Q Is there anything you think we ought to know?  
8 You know why we are here. You know what the issue is  
9 I believe. You should.

10 Is there anything you think we ought to know?

11 A Not that I'm aware of.

12 Q Do you know what the issue is?

13 A Well, partly. I understand that GPU wants to  
14 restart the unit and I understand there is some concern  
15 about the integrity of the management.

16 I will say this, that --

17 Q But you don't know what the exact issue is  
18 that we are hearing here today?

19 A Today, about Mr. Dieckamp's mailgram and that  
20 type thing?

21 Q Yes.

22 A Yes, I do.

23 Q Okay.

24 A And I will say this, that I'm sure Mr. Dieckamp  
25 did not know anything I knew during the accident. I also

#17-7-SueT

1 recognize that some people from GPU were talked to by GPU  
2 management. Unfortunately, I think they were only the  
3 people that were there at the -- when the accident initiated,  
4 and it wasn't -- like myself, for instance, was never inter-  
5 viewed.

6 You know, I don't know why. I think, you know,  
7 there is probably a lot of reasons for it. But I think  
8 that's the reason we are into this type of thing, because  
9 there was not everybody that was there was in fact inter-  
10 viewed by GPU, so Mr. Dieckamp probably got the information  
11 from the people that were there, that they knew nothing  
12 about the hydrogen and the spike. And he made the assumption  
13 that was all the people that were, in fact, in charge and  
14 running the place at the time.

15 Q Is there anything, knowing what the issue is and  
16 what we are inquiring about, that you think should have been  
17 asked of you that wasn't?

18 If it is conceivable that any question was left  
19 unanswered.

20 (Laughter.)

21 A I --

22 (The witness is consulting with Mr. McBride.)

23 There is one thing that I do want to just bring  
24 up very briefly, and on advice of counsel we think it may  
25 be beneficial. When I first arrived at the Unit 2 control

#17-8-SueT 1

2 room, when I entered the Unit 2 control room I was approached  
3 by Mike Ross and asked not to -- not to create any big  
4 problems in terms of what was happening. In other words,  
5 don't get people excited.

6 And I think that was based on my reputation at  
7 the time as the shift supervisor as, you know, I try to  
8 recognize what needs to be done and go do it and require  
9 people to comply with whatever had to be done. And basically,  
10 that's it. That's about the only thing that I know --

11 Q You took that as constructive advice from Mike  
12 Ross?

13 A Yes. I took it as constructive in terms of --  
14 I didn't know what the situation was there, and he was  
15 there, and he knew what it was. And I took it as an  
16 indication that, you know, basically they didn't need any-  
17 body coming in there and creating a scene or, you know,  
18 with negative type input.

19 (The witness is conferring with Mr. McBride.)

20 Q All right. Now, please be careful that when  
21 you confer with counsel that you have your own genuine  
22 memory of what he is telling you.

23 A Yes.

24 Q He is being helpful, I'm sure, but just make  
25 sure it's your genuine memory and not something that you  
have remembered from interrogatories or something.



#17-9-SueT 1

2 A Yes. No, it's definitely my memory. It's just  
that I'm getting a little drifty here now.

3 Q Yes. I seem to think from your reaction that  
4 you recall and that it's genuine.

5 A Yes. The other thing I did want to mention is --  
6 and I think this was brought out on the record before, but  
7 I just want to make sure it's there and understand and  
8 people in the room understand it.

9 When I related to Gary about the pressure spike  
10 and got permission to draw the bubble, one of the comments  
11 was that, you know, that Mr. Miller made to me is: Well,  
12 let's not get everybody excited about it, because we are  
13 not sure of what the situation is.

14 And I do remember Mr. Ross being there at that  
15 time in the conversation. And, again I think that Mr.  
16 Miller, the idea there was that he had a lot of things on  
17 his mind, he had to go see the Lieutenant Governor, and  
18 he didn't have time to fully investigate what was going  
19 on in terms of that pressure spike. And that was the reason  
20 behind his comment.

21 (The Board members are conferring.)

22 Q Judge Wolfe suggested some clarification might  
23 be in order. You alluded to Mr. Ross' advice to you  
24 when you came in, and you said you thought it was  
25 constructive advice. Let's be sure that we have the full

#17-10-SueT 1

meaning.

2

Did you infer anything he told you to mean a suggestion that you withhold any information?

3

4

A No. No. It had nothing to do with information.

5

Q He is telling you to be calm?

6

A He is telling me to be calm, don't get people excited, that type of thing.

7

8

JUDGE SMITH: Any further questions?

9

MS. BERNABEI: This is just one on the very last point Mr. Chwastyk made.

10

11

RE CROSS EXAMINATION

12

BY MS. BERNABEI:

INDEXXX

13

Q You said that Mr. Ross was present in your conversation with Mr. Miller; is that correct?

14

15

A Only in part of it, yes.

16

Q Okay. And that's the part in which Mr. Miller said: Let's not get everyone excited, something of that sort?

17

18

A Yes.

19

Q Was Mr. Ross there, to your knowledge, for any part of your description or discussion of the pressure spike?

20

21

A I really don't recall. The only thing I recall Mike being there is right at the end when Gary said: Let's not get everybody excited, and Mike agreed with that.

22

23

24

25

#17-11-SueTl

1 Q Okay. So, he concurred in Mr. Miller's advice  
2 to you?

3 A Yes.

4 Q Okay. Was it your sense that Mr. Ross under-  
5 stood what the discussion had been about?

6 A Yes.

7 MS. BERNABEI: Okay. I have no other questions.

8 JUDGE SMITH: Mr. Blake?

9 MR. BLAKE: No, sir.

10 JUDGE SMITH: All right. Thank you very much  
11 for coming. We appreciate it.

12 WITNESS CHWASTYK: Thank you.

13 MR. MC BRIDE: Judge Smith --

14 JUDGE SMITH: We can go off the record for --  
15 wait, do you want to be on the record?

16 MR. MC BRIDE: I just wanted to thank you for  
17 all of your courtesies, both to my client and to me, during  
18 this. It has been somewhat of a sui generis situation. You  
19 have been very gracious.

20 JUDGE SMITH: Okay. Well, thank you for your  
21 comment.

22 (The witness stood aside.)

23 Now, off the record.

24 (At this point, an off-the-record discussion  
25 ensues.)

Sim 18-1

1 JUDGE SMITH: All right, we will go back on the  
2 record.

3 Mr. Mehler, I wanted to comment that I noticed  
4 as you were sitting back there waiting for your turn to  
5 testify that you were nodding yes and no and shaking your  
6 head in response to the questions put to Mr. Chwastyk, and  
7 if you have an occasion to be present again when a witness  
8 is testifying, you shouldn't do that.

9 Now Mr. Chwastyk could not see you, and it  
10 was harmless.

11 MR. MEHLER: I am sorry.

12 JUDGE SMITH: It is something you really should  
13 not do.

14 All right, would you stand and receive the oath,  
15 please.

16 Whereupon,

17 BRIAN ALLEN MEHLER

18 was called as a witness and, having been first duly sworn  
19 by Judge Smith, was examined and testified as follows:

20 MR. McBRIDE: Judge Smith, just one preliminary  
21 matter. I don't know whether the deposition Mr. Mehler  
22 gave in this proceeding will be the subject of questioning  
23 or not or whether the Board even has a copy, but if you desire,  
24 I have transcript corrections to that deposition.

25 JUDGE SMITH: Well, the method you followed last

INDEXXXXXXXXX

Sim 18-3

1 Q When did you report to work on March 28th?

2 A Roughly around ten of six.

3 Q And to whom did you report at that time?

4 A I was called on the telephone and asked to come  
5 to work. When I got to the Unit 2 control room I seen Mike  
6 Ross talking to Ken Bryant and I reported to Mike Ross.

7 Q In summary form can you tell us what conditions  
8 or parameters of the reactor you were briefed on at that time?

9 A It was a general discussion basically telling me  
10 that the turbine tripped or the reactor tripped. I had  
11 a conversation later with Zewe within a few minutes where he  
12 said he was trying to achieve natural circulation and he  
13 was isolating one of the steam generators because he believed  
14 he had primary to secondary leakage on it.

15 Q Were you informed at that time or at any time  
16 thereafter about the declaration of a site emergency or a  
17 general emergency?

18 A That was some time later roughly around, I would  
19 say around a quarter to seven that that occurred.

20 Q And there were certain alarms that went off at  
21 that time; is that correct?

22 A There were a lot of alarms going off all morning.  
23 I don't know which specific alarms you are referring to.

24 Q Okay. Containment building or radiation alarms,  
25 dome monitor alarms?

Sim 18-2

1 time I thought was very helpful and why don't you follow  
2 that.

3 MR. McBRIDE: I have got copies ---

4 JUDGE SMITH: You will give us copies.

5 (Mr. McBride handed copies to the Board.)

6 MR. McBRIDE: That is all I had.

7 JUDGE SMITH: Would you state your name, please,  
8 sir?

9 THE WITNESS: My name is Brian Allen Mehler.

10 JUDGE SMITH: You may inquire, counselor.

11 CROSS-EXAMINATION

12 BY MS. BERNABEI:

13 Q Mr. Mehler, will you describe for us your current  
14 position?

15 A My current position is the Rad-Waste Operation  
16 Manger at TMI Unit 1.

17 Q Directing your attention to March 28th, 1979, what  
18 was your position at that time?

19 A I was shift supervisor.

20 Q Generally what were your duties and responsibili-  
21 ties in that position?

22 A I was responsible for both Unit 1 and Unit 2,  
23 to operate them safely.

24 Q How long had you held that position by March 28th?

25 A It was approximately one year.

INDEXXXXXX

Sim 18-4

1 A There were radiation monitoring alarms coming  
2 in around that time, and that was I would assume the reason  
3 that a site and a general emergency was later declared.

4 Q Now do you remember any discussion about core  
5 damage in this morning period?

6 A No, I do not.

7 Q Do you remember testifying at a previous time  
8 that sometime after the alarms went off in this morning  
9 period you understood there was some core damage, although  
10 you did not understand the extent?

11 A That was my belief based on the radiation alarm  
12 coming in on the let-down.

13 Q And that was in this morning period on March 28th;  
14 is that correct?

15 A It was in that period of time, yes.

16 JUDGE SMITH: The radiation alarm coming in on  
17 the what?

18 THE WITNESS: It would have been your primary  
19 sampling coming off your let-down line.

20 JUDGE SMITH: Let-down?

21 THE WITNESS: Yes.

22 BY MS. BERNABEI:

23 Q Is it fair to say that you have also testified  
24 in previous times that you believed and had an understanding  
25 that the top portion of the core was uncovered, perhaps a

Sim 18-5

1 third or so?

2 A I don't recall testifying to that.

3 Q Okay. Let me refer you to your Senate testimony ---

4 (Pause.)

5 MR. BLAKE: While Ms. Bernabei is looking for  
6 it, I will object to further questions along this line which  
7 go beyond the pressure spike and hydrogen generation initiation  
8 of electrical equipment which goes into parameters other than  
9 those which the Board has viewed as being within the scope  
10 of this proceeding.

11 JUDGE SMITH: The question pertained to a third  
12 of the core being uncovered?

13 MR. BLAKE: That is correct.

14 JUDGE SMITH: Overruled.

15 BY MS. BERNABEI:

16 Q Mr. Mehler, I would like to refer you to page  
17 7, your answer in the middle of the page of your August  
18 22nd, 1979 interview.

19 JUDGE SMITH: Joint Mailgram Exhibit?

20 MS. BERNABEI: Joint Mailgram Exhibit 68.

21 (Pause.)

22 JUDGE SMITH: What page?

23 MS. BERNABEI: Page 7, the middle of the page.

24 BY MS. BERNABEI:

25 Q Mr. Mehler, the question is didn't you indicate



Sim 18-6

1 in this interview on August 22nd, 1979 that you believed, or  
2 the group of you believed that the top portion of the core  
3 was uncovered, perhaps the top third?

4 A I believe I said I guessed the top third. I am  
5 trying to read a little bit more to try and get the feel  
6 of the question.

7 Q Okay. Isn't the question, and I will refer you  
8 to line 10, "Did you feel that the core was uncovered during  
9 most of the morning and afternoon of the --- " and then  
10 apparently the questioner is cut off, and it says "Mr. Mehler:  
11 After we got the alarms, well we knew we had fuel damage. To  
12 what extent no one really knew. It had to be uncovered to  
13 get fuel damage. We anticipated we probably uncovered just  
14 the top portion of it. I don't know what they figured we  
15 uncovered, I guess the top third."

16 Is that correct?

17 A And that was just an assumption on my part.

18 JUDGE SMITH: You had indicated that you wanted  
19 an opportunity to get the sense of the question. Did you  
20 have that opportunity?

21 THE WITNESS: I wanted to read a little bit more  
22 to try and figure out what they were referring to at the time.

23 MS. BERNABEI: Sure.

24 (Pause.)

25 JUDGE SMITH: We think it has been a long day

Sim 18-7

1 and it may be a good time to quit. After a while it is  
2 more difficult to follow the testimony.

3 May I suggest that you finish looking at that.  
4 We won't take any more testimony this evening. And if it  
5 won't do any destruction to your cross-examination plan, you  
6 might point out to Mr. Mehler and Mr. McBride this evening  
7 what other documents or other references you may be examining  
8 him on, unless it will interfere with your cross-examination.

9 MS. BERNABEI: I think a large portion of the  
10 interviews that Mr. Mehler gave, including the deposition  
11 in this case, we will be referring to in substantial portions.

12 JUDGE SMITH: Okay.

13 MS. BERNABEI: Judge Smith, if I may ask just  
14 one other question along this line. It is a follow-up  
15 question.

16 JUDGE SMITH: Are you satisfied that you understand  
17 the context of your question and answer?

18 THE WITNESS: Basically they were asking what  
19 train of thought we had that morning, and if you on farther,  
20 we decided to depressurize and drop the core flood tanks  
21 to ensure that the core was covered.

22 JUDGE SMITH: Okay.

23 THE WITNESS: I am not sure that the intent was  
24 that we thought the core was uncovered, but the possibility  
25 could have existed in my mind.

Sim 18-8

1 BY MS. BERNABEI:

2 Q Now when you talk about "we," who did you include?

3 A I make the assumption that other people were  
4 thinking the same thing I did. I can only speak for myself.  
5 I guess that should be an "I".6 Q Okay. Haven't you testified at prior times that  
7 included in this discussion of core damage in this morning  
8 period were Mr. Ross and Mr. Zewe?9 A I believe everybody assumed there was some core  
10 damage when the radiation alarms came in because the let-down  
11 monitor alarm is designed to alarm when you have approximately  
12 one percent failed fuel.13 Q I am talking now about the evaluation or considera-  
14 tion of core damage that is mentioned in your second interview,  
15 and you used the word "we," and I have asked you who you were  
16 talking about in terms of that evaluation.17 Isn't it true that you have testified at prior  
18 times that that "we" included Mr. Ross and Mr. Zewe?

19 A I cannot say that for sure at this time.

20 Q Let me refer you to one other interview, your  
21 October 11th, 1979 interview with the Special Inquiry Group,  
22 specifically on page 23 of what appears as Joint Mailgram  
23 Exhibit 89.

24 JUDGE SMITH: 89?

25 MS. BERNABEI: 89.

Sim 18-9

1 THE WITNESS: Would you repeat the page number,  
2 please?

3 MS. BERNABEI: Yes. It is page 23, specifically  
4 starting on line 16.

5 (Pause.)

6 THE WITNESS: The previous question talks about  
7 damage and it was based on the radiation alarms coming in.

8 Q And the "we" refers to ---

9 A "We" referred to Mike and Bill and myself and  
10 the CRO's on duty.

11 Q Okay. That would be the control room operators  
12 on duty at that time?

13 A Yes.

14 Q And also the foreman on duty at that time? That  
15 is what the testimony says, does it not?

16 A Yes, it does.

17 JUDGE SMITH: All right. Then we will adjourn  
18 this evening and meet tomorrow at 9 a.m.

19 MR. BLAKE: Judge Smith, I will provide this  
20 evening copies of what documents I earlier referred to,  
21 that notification with regard to Faust and McGovern. I will  
22 just pass them out to everybody.

23 JUDGE SMITH: Okay.

24 (Whereupon, at 5:20 p.m., the hearing adjourned,  
25 to reconvene at 9:00 a.m., Wednesday, November 28, 1984.)

\* \* \* \* \*

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the  
UNITED STATES NUCLEAR REGULATORY COMMISSION in the matter of:

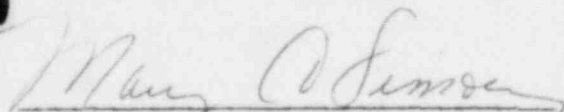
NAME OF PROCEEDING: Metropolitan Edison Company  
(Three Mile Island Nuclear Station, Unit 1)

DOCKET NO.: 50-289-SP

PLACE: Harrisburg, Pa.

DATE: November 27, 1984

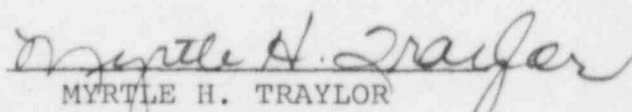
were held as herein appears, and that this is the original  
transcript thereof for the file of the United States Nuclear  
Regulatory Commission.

  
MARY C. SIMONS  
Official Reporter

(Sigt)   
(TYPED) GARRETT J. WALSH, JR.

Official Reporter

Reporter's Affiliation: ACE Federal  
Reporters.

  
MYRTLE H. TRAYLOR  
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