

**ORIGINAL**  
UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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In the matter of:

COMMISSION MEETING

Discussion/Possible  
Vote on Fermi Restart

Docket No.

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Location: Washington, D. C.  
Date: Monday, July 7, 1986

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1 UNITED STATES OF AMERICA  
2 NUCLEAR REGULATORY COMMISSION  
3 DISCUSSION/POSSIBLE VOTE ON FERMI RESTART  
4 (Public Meeting)  
5

6 MONDAY, JULY 7, 1986

7 Nuclear Regulatory Commission

8 1717 H Street, N.W.

9 Washington, D.C.

10 The Commission met, pursuant to Notice, at  
11 2:05 p.m.

12 COMMISSIONERS PRESENT:

13 LANDO W. ZECH, JR., Chairman of the Commission

14 JAMES K. ASSELSTINE, Commissioner

15 THOMAS M. ROBERTS, Commissioner

16 FREDERICK M. BERNTHAL, Commissioner

17 STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

18 S. Chilk W. Parler

19 V. Stello J. Keppler

20 R. Vollmer J. Taylor

21 J. Calhoun W. McCarthy

22 R. Sylvia M. Keegan

23 R. Petticrew J. Eckert

24 AUDIENCE SPEAKERS:

25 D. Lynch E. Greenman

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

CHAIRMAN ZECH: Good afternoon, ladies and gentlemen. The purpose of the meeting today is for the Commission to be briefed on the status of the Detroit Edison efforts to comply with actions required prior to an NRC decision to permit the Licensee to proceed with testing preparatory to power ascension and full power operation.

We will be briefed today by the NRC Staff and by senior management from Detroit Edison and their Independent Oversight Committee; a representative from the Safe Energy Coalition of Michigan; and Monroe City-County officials.

The operating license for Fermi Unit 2, which permitted fuel loading and low power testing, was issued on March 20th, 1985. The Commission voted to issue a full power license for Fermi Unit 2 on July 10th, 1985. The Commission later learned that premature criticality due to a rod pull incident occurred on July 2nd, 1985. Following this incident, the plant has remained in a shutdown condition for maintenance and for installation of NRC required safety equipment, pursuant to an NRC confirmatory action letter of July 16th, 1985 in which Detroit Edison agreed not to operate above 5 percent power, and a 10 CFR 50.54(F) letter of December 24th, 1985.

Authorization for higher or, in fact, any power levels will be given only when and if the NRC is satisfied



1 that the utility has adequately dealt with the issues  
2 contained in NRC's confirmatory action letter and the 10 CFR  
3 50.54(F) letter.

4 During the briefing today, I ask that my fellow  
5 Commissioners identify any additional concerns that they feel  
6 need to be addressed by the Licensee or the staff. I believe  
7 that the Commission should be kept fully informed on the  
8 status of the NRC Staff's continuing evaluation of the Detroit  
9 Edison's preparation for restart of the Fermi Unit 2 reactor.

10 At the conclusion of today's meeting, I will pose  
11 the following question to my fellow Commissioners: Based on  
12 the conditions imposed in the recent enforcement action, the  
13 staff's planned involvement in oversight and the Licensee's  
14 Performance Improvement Program, do you endorse a decision by  
15 the staff to allow the restart of Fermi-2 when the staff  
16 determines that they are satisfied that the Licensee and the  
17 plant are ready for restart?

18 It appears to me that we have a full agenda on this  
19 important matter today. I would like to ask the presenters to  
20 do their best to adhere to the prescribed times allotted for  
21 their presentations. My review of the staff's presentation  
22 leads me to believe that the latter part of the presentation  
23 will answer many questions that the Commissioners may have. I  
24 would respectfully request that we keep our interruptions to a  
25 minimum.

1           Having given that brief background, do any of my  
2 fellow Commissioners have any opening remarks?

3           COMMISSIONER ASSELSTINE: Just a couple of brief  
4 points, Lando. I would like to ask the staff as they go  
5 through particularly the major problem areas, if they could  
6 start off by just highlighting -- both to refresh our memory  
7 and to refresh the memories of those in the audience -- what  
8 the problem is, how it came to our attention and relevant  
9 background information. I think we touched on that on a few  
10 of these back in March, but I think it would be useful to sort  
11 of highlight that at the start of each one.

12           The second point I would make I think is a broader  
13 question that perhaps we could turn to after the staff's  
14 presentation, and that is: how did so many of these things  
15 occur? And I'm thinking in particular of the management  
16 problems without us being really aware of it or sensitive to  
17 it before we issued this plant a full power license last year.

18           I went back this morning and once again re-read some  
19 of the things that I, among other commissioners, said about  
20 this utility last year, and apart from being a fairly humbling  
21 experience the message that came through in my own mind was  
22 that we sure missed the boat on a lot of these things. And I  
23 would like to explore that issue a bit at the end of the  
24 staff's presentation on why we failed to pick up some of these  
25 things as well.

1           Those are the only comments I have.

2           CHAIRMAN ZECH: Thank you. Anyone else?

3           [No response.]

4           CHAIRMAN ZECH: Mr. Stello, would you please  
5 proceed?

6           MR. STELLO: Our intent today is to very quickly  
7 review for you the history of the Fermi problems, the status  
8 and then clearly identify those things that we need to finish  
9 before we would be prepared to allow the plant to start up.

10          I have heard the request of Commissioner  
11 Asselstine. We will do our best to attempt to respond to  
12 those kinds of issues, but I do believe if we are going to ask  
13 for an examination of the history and try to determine what it  
14 is that we did and didn't do as well as we ought to, that that  
15 perhaps ought to have more thoughtful consideration than we'd  
16 be able to give it here at the table. And I'll listen  
17 carefully and I'd like at least the opportunity at the  
18 conclusion to decide if we really need to go back and review  
19 that history -- maybe we ought to do that more deliberately  
20 and carefully rather than try to do it in an ad hoc fashion.

21          I'll ask Mr. Keppler to lead us through the  
22 presentation. You have copies of the viewgraphs that will be  
23 used, and I assume there were in fact enough at the back of  
24 the room so that everyone got a copy.

25          [Slide.]

1           MR. KEPPLER: Thank you, Mr. Stello. My briefing  
2 today will cover very briefly the history of what has  
3 happened. I want to spend a fair amount of time on the  
4 problems and corrective actions that have taken place, and  
5 then I will summarize the status of other issues and identify  
6 the major items remaining to be completed before the staff is  
7 prepared to authorize restart of the reactor.

8           [Slide.]

9           Very briefly, the low power license was issued on  
10 March 20th, and as you mentioned, Mr. Chairman, the premature  
11 criticality event took place just a little over a year ago.  
12 The Commission met on July 10th, 1985 and a full power license  
13 was granted by the staff following the Commission meeting; the  
14 full power license granted on July 15th. At that time, I  
15 learned of the premature criticality event and took action to  
16 put a hold on plant operations above 5 percent power at that  
17 time until the matter could be investigated by the Office of  
18 Investigations.

19           After July 15th, the plant operated from zero power  
20 up to five percent power, and during those following months,  
21 numerous operating errors occurred, and that led to a further  
22 reluctance on the part of the staff to see the plant go above  
23 5 percent power because we had felt the utility had not  
24 demonstrated the capability to proceed.

25           That resulted in a plan of action by Detroit Edison

1 Company aimed at improving plant performance, and that plan  
2 was submitted to us in October of 1985. But before the plan  
3 could be demonstrated how well it was working, the utility  
4 went into a planned outage to complete work committed to  
5 previously at the time of licensing in the area of fire  
6 protection equipment qualification.

7 And that outage commenced on October 11, and during  
8 that outage more problems were encountered that reflected  
9 adversely on the hardware of the plant, it reflected adversely  
10 on the management of the plant and on the plant security  
11 capabilities.

12 As a result of that, we issued a 50.54(F) letter in  
13 December. That 50.54(F) letter requested the Licensee to  
14 review its management, why the problems had occurred, to  
15 ascertain what it would take to restart the reactor, and then  
16 how they would, from there, operate the plant with fewer  
17 problems than in the past.

18 The Licensee responded to that 50.54(F) letter in  
19 January and was very close to being in a position to restart  
20 the reactor in April of 1986, but at that point in time  
21 because of the fact that the sources had almost depleted to  
22 the point that they could not use them for startup, rather  
23 than rush into operation the utility chose at that time to  
24 extend the outage, replace the sources and also during the  
25 outage to complete some testing that they would have to do in

1 the fall of this year had they started up earlier.

2 Right now, the plant is projected for startup in the  
3 latter part of this month, and I think that date is  
4 achievable.

5 [Slide.]

6 I have listed very briefly the major problems and I  
7 am going to dwell on each problem as we go through them, but  
8 they focus on inadequate management, management controls,  
9 administrative deficiencies related to plant operations  
10 particularly in the control room, engineering design  
11 deficiency problems, security problems which happen and  
12 continue to be, and hardware problems.

13 [Slide.]

14 We addressed -- I guess trying to follow your cue,  
15 Commissioner Asselstine, you asked what the problem was. Even  
16 though the utility was only able to run the plant for a short  
17 period of time, there were numerous problems in the operation  
18 of the plant in addition to the criticality event, where  
19 numerous limiting conditions for operation were violated.  
20 Those problems reflected adversely on both operations and  
21 maintenance, and in addition, they had security problems and  
22 problems that related to plant engineering.

23 And as a result of the diversity of the problems  
24 that we found and the many functional areas that they fell  
25 into, we chose at that time to issue the 50.54(F) addressing



1 the broad issue of management because we felt that the  
2 management control systems had not performed the jobs  
3 intended, and we were concerned that if we didn't address it  
4 in this kind of a timely manner that we might run into  
5 problems further down the road. So it was a conscious staff  
6 decision to issue that 50.54(F) letter and involve the EDO and  
7 the major program offices.

8 COMMISSIONER ASSELSTINE: I take it from that that  
9 your judgment was that as you looked at all of these operating  
10 events and operating problems through the brief full power  
11 program at the plant, your conclusion was that the root cause  
12 of many of those deficiencies was a management weakness on the  
13 part of the utility's nuclear organization; is that fair?

14 MR. KEPPLER: Yes.

15 COMMISSIONER ASSELSTINE: And I take it right after  
16 the 50.54(F) letter was issued, the utility's own Independent  
17 Overview Committee came out with its evaluation of the  
18 management.

19 MR. KEPPLER: Well, let me make the point upfront  
20 that the staff was behind the suggestion of bringing in an  
21 overview committee. We felt that an outside team that was not  
22 tied in with day-to-day operations, that had not blessed the  
23 Fermi operation was the type of thing that was needed. We  
24 didn't feel the staff could put the resources into that type  
25 of effort, and we sort of encouraged the concept of an

1 overview committee almost as an extension of the staff  
2 itself. And the utility was receptive to that suggestion and  
3 I'll touch more on the overview committee in a moment.

4 When we decided to issue the 50.54(F) letter, we  
5 held a meeting with the top management of the company and  
6 talked about all of the issues associated with a 50.54(F)  
7 letter, and then the utility received the letter initial  
8 response later in January.

9 I think the key elements of this right away were  
10 that -- and perhaps most importantly -- was that the Chief  
11 Executive Officer of the company, who really had not been  
12 involved in any major way, took it upon himself to place  
13 himself in control of restart of the reactor. He had that  
14 plant basically reporting to him, whereas before it was  
15 reporting up through the President of the company, and he  
16 became much more directly involved and has remained involved.  
17 He has been at the plant, he has been in my office many times,  
18 and I viewed that change as very important and refreshing.

19 On a short term basis, they placed quality assurance  
20 in the role of reporting to directly to the President, and  
21 then they established this Independent Overview Committee.  
22 This Independent Overview Committee is comprised of six  
23 members who have very broad experience in the industry, and I  
24 will leave that for Mr. Calhoun to talk to you more about.

25 That Overview Committee has spent over 1500 hours in



1 the review of Fermi. They issued a report back at the end of  
2 January. That report was made public; it's a very  
3 hard-hitting report, very critical of the lack of experience  
4 on the part of the company. It was critical of their  
5 leadership, their posture on accountability and their  
6 management control systems in general, and they made a number  
7 of recommendations to strengthen the Fermi operation.

8 Those recommendations, which Mr. Calhoun will talk  
9 about, have all been completed with the exception of one, and  
10 that action is in the process right now. The most significant  
11 recommendation by the Overview Committee was to bring in an  
12 experienced senior vice president. That action has been  
13 done. The utility retained Mr. Sylvia, formerly with Virginia  
14 Electric Power Company, who had experience with both Surry and  
15 North Anna, and he had been retained subsequent to that by  
16 Cincinnati Gas and Electric Company to bring Zimmer into  
17 operation. That didn't happen, but that's not a reflection on  
18 Mr. Sylvia, and we believe that the move to bring in an  
19 experienced person has been accomplished.

20 I might add also that the company has hired some 60  
21 people for the plant since the beginning of the year and 15  
22 of those have prior commercial nuclear experience, so they are  
23 doing something to strengthen that.

24 The Overview Committee also suggested hiring a vice  
25 president for engineering and strengthening that role within

1 the company. That effort is under active recruitment right  
2 now for that position. They have made organizational  
3 modifications in the Engineering Department.

4 Security is another area that they addressed. This  
5 has been a weak area and it is still not fixed, but they are  
6 working at it and they have action underway to recruit a new  
7 Director of Security.

8 And lastly, they have retained an experienced  
9 advisor to Mr. Sylvia, an individual who formerly worked with  
10 the NRC and presently works with the Management Analysis  
11 Company.

12 COMMISSIONER ASSELSTINE: Who is that individual?

13 MR. KEPPLER: Carl Alderson; he used to be in  
14 Region II.

15 [Slide.]

16 The plant operations during the period of July  
17 through October were plagued with numerous LER reports, LCO  
18 violations, and they reflected adversely on the administrative  
19 controls for plant operations.

20 I mentioned that the company submitted a Reactor  
21 Operations Improvement Plan in October just prior to shutting  
22 down the plant, and that plan was aimed at improving the  
23 controls within the control room area to assess and track  
24 plant operations, specifically. As a result of the Overview  
25 Committee's report and their findings, they came out with a

1 Nuclear Operations Improvement Plan which was officially  
2 submitted in May of 1985, and that is a much broader-based  
3 program --

4 COMMISSIONER ASSELSTINE: You mean 1986, right?

5 MR. KEPPLER: I'm sorry, 1986, yes. And that plan  
6 addressed all of the operations, and specifically takes on the  
7 recommendations of the Overview Committee.

8 Steps were also taken to enhance training. They  
9 moved more experienced people into the control room and the  
10 Operations staff, particularly the shift supervisor, is in  
11 direct control of work activities planning.

12 [Slide.]

13 CHAIRMAN ZECH: Is the intention to have more  
14 management directly involved in the control room activities  
15 when and if restart takes place?

16 MR. KEPPLER: Yes. When I was here last week,  
17 Mr. Chairman, you mentioned you were interested specifically  
18 in what actions had been taken to prevent a recurrence of  
19 what took place on July 1st of last year. And what I have  
20 here on the next two slides is specifically addressing that  
21 question that you raised.

22 [Slide.]

23 I will just briefly run through it. They have made  
24 a number of improvements aimed at bringing more experience  
25 into the control room; specifically, the Assistant Nuclear

1 Shift Supervisor and the SOA. The shift supervisor is  
2 directly involved in work planning activities that affect what  
3 goes on in the control room.

4 They have also made a number of improvements in the  
5 training area, including workshops for managers and  
6 supervisors to increase their sensitivity to safety and  
7 regulatory issues.

8 They have made adjustment, made modifications to the  
9 procedures and controls associated with rod pull. They have  
10 put together a training film of the event and required that to  
11 be viewed by all reactor operators, and they -- whatever  
12 differences had existed at the time between the simulator and  
13 the plant, they straightened that out.

14 [Slide.]

15 They also have instituted a number of audits. They  
16 have plant managers conducting surveillances of the control  
17 room, the Superintendent of Operations is observing the  
18 activities, and management is directly involved in plant  
19 performance. And you might recall with the enforcement action  
20 that was taken last week, we have tied in an audit requirement  
21 that will provide further efforts in that area.

22 CHAIRMAN ZECH: Let me just say that these are good  
23 things to do but they are not all that different than what one  
24 might expect. This is what you should expect when you do  
25 these kind of operations. This is the kind of supervision you

1     should have; I think it's very good. But I think it's -- you  
2     know, it's something that should have taken place on the other  
3     event, which showed a real lack of complete understanding as  
4     far as I'm concerned as to the importance of the things that  
5     were going on.

6             So this is good, and this is the kind of supervision  
7     that one should have in these operations but it should  
8     continue, it shouldn't just, you know, be there for a while.  
9     It should certainly continue for a considerable period of  
10    time. These are the kinds of supervision that you need during  
11    these kind of startup operations, in my view.

12            MR. KEPPLER: I agree with you, and this is the  
13    reason -- if you go back, this is the reason the staff was so  
14    appalled at the way they just reinserted the control rods and  
15    started back up again.

16            I also listed some other activities that have been  
17    instituted, including a management meeting with each shift  
18    supervisor and assistant shift supervisor and SOA to press  
19    upon them the importance of their jobs. They have brought the  
20    reactor engineer more into the operating team, which was a  
21    good move. And they have made some minor changes to the  
22    procedures for rod pulling.

23            COMMISSIONER ASSELSTINE: Before you leave that  
24    slide, the impression I get from having read a lot of the  
25    voluminous information that was developed on the July 1st

1 event last year was that it wasn't that the people on the  
2 plant staff weren't getting correct advice; it's that they  
3 weren't following some of that advice. There were experienced  
4 people that were telling them what had gone on and there were  
5 management people at the plant who were choosing not to  
6 believe it, at least for some period of time.

7 Which of these changes is going to get at that  
8 problem, and how are you confident or satisfied that that  
9 problem has now been resolved as well?

10 CHAIRMAN ZECH: I'm not sure I would agree with that  
11 assessment, but go ahead and address it if you want to.

12 MR. KEPPLER: I think there were several points; you  
13 have to look back at that event. First of all, there were  
14 inexperienced people starting up the plant. And people really  
15 didn't appreciate what their job was in that control room.  
16 There were a number of people in the control room but they  
17 weren't clear as to what their role was.

18 In addition to that, the shift supervisor wasn't in  
19 the control room. The assistant shift supervisor was in the  
20 control room part of the time but he was preoccupied with  
21 something else. The SOA wasn't doing his job, and I'm not  
22 sure he appreciated what his job was at that time.

23 I think it's more of taking a step back and  
24 re-acquainting or re-familiarizing, re-stressing what  
25 everybody's job is and making it clear that they have to work



1 as a team.

2 If you recall the report from the Overview  
3 Committee, one of the things that came across very loud and  
4 clear was this was not a team operation up there. This was a  
5 bunch of individuals doing their various things.

6 CHAIRMAN ZECH: That was my impression. It was a  
7 lack of experience. It was just very clearly evident that  
8 they -- it wasn't so much -- and there was some confusion,  
9 certainly. But to me it was clearly a lack of experience,  
10 which is a concern because there should have been more  
11 experience there.

12 But I think it was lack of management oversight as  
13 much as anything, but not so much any kind of a willful thing;  
14 it was more or less just reading certain events one way or  
15 reading them another and not having the experience to make a  
16 good evaluation on the spot because they didn't have the  
17 experience, the people in the control room.

18 This was kind of my assessment. So it was confusion  
19 as well as lack of experience. But I think that's kind of how  
20 I read it. Is this what you are telling us, too?

21 MR. KEPPLER: Yes. I've spent just a few minutes  
22 here. This Nuclear Operations Improvement Plan is a very,  
23 very broad-based plan. My staff has had a lot of input to the  
24 utility. But this plan was put together with the hindsight of  
25 what happened in that control room, the problems after that

1 and was aimed at addressing the concerns of the Overview  
2 Committee. And there had been really almost a reshaping of  
3 attitudes, a reshaping of what people need to do to work  
4 together. There have been massive reorganizations in this  
5 group, so that these various components within the utility  
6 aren't competing; they are supporting.

7 [Slide.]

8 For example, Engineering was totally out of the  
9 picture before. This move here strengthens Engineering's role  
10 and makes them a part of the operation.

11 The administration within the plant was almost a  
12 detriment to the operation. People didn't know who was in  
13 charge, and I think these moves are steps in the right  
14 direction.

15 Now the proof of the pudding is going to be what  
16 happens when the plant runs.

17 CHAIRMAN ZECH: But we've got to have a certain  
18 amount of confidence that changes have taken place, and that's  
19 what you're going to tell us, I presume, as we go through  
20 here. You're starting to tell us that now?

21 MR. KEPPLER: Yes.

22 CHAIRMAN ZECH: Okay, well let's go.

23 COMMISSIONER ASSELSTINE: But on training, that's  
24 one of the things you just covered, it appears that most of  
25 the training has really focused on rod pulling. What kind of



1 training has gone on, for example, in assuring that each of  
2 these shifts functions as a team? Have they done team  
3 training and have you been able to review that sufficiently so  
4 that you are confident that this group will not perform as a  
5 group of individuals but that they'll function as a team?  
6 That the engineer will be listened to when he says something  
7 like, "hey, fellows, I think you went critical." When the  
8 shift advisor, the experienced guy that they have hired  
9 from other utilities tells them, "Hey, fellows, I think you  
10 went critical here," that they will listen to that.

11 CHAIRMAN ZECH: I agree. That is the key point.  
12 It's just as important. The team work and the listening to  
13 each other and working together and gaining from their own  
14 knowledge than it is the individual thing. I agree with  
15 that. That's a very important element of working together,  
16 and I hope you're going to tell us what they have done in that  
17 regard.

18 MR. KEPPLER: Bob, could you put up the backup slide  
19 I had on enhanced training?

20 [Slide.]

21 I don't know that these are in any particular order,  
22 but the instrumentation and control technicians have received  
23 additional training. Simulator training has been done for all  
24 RO's who will --

25 CHAIRMAN ZECH: How about emphasizing the team

1 training and the team work concept as you're going through  
2 these two?

3 MR. KEPPLEP: If you take the next part,  
4 requalification training to highlight routine operations, this  
5 is changing modes, starting up, encountering LCO's, handling  
6 work requests, that type of thing. So this had been lacking  
7 before in my judgment.

8 COMMISSIONER ASSELSTINE: And they'll be trained as  
9 a shift when they're doing it?

10 MR. KEPPLER: As a shift. Supplemental training on  
11 rod manipulations, training to emphasize differences between  
12 the plant and the simulator.

13 CHAIRMAN ZECH: The next to the last item looks like  
14 it's what we're looking for.

15 MR. KEPPLER: Operations staff providing on-shift  
16 training on significant plant and procedure changes. And  
17 corrective actions.

18 Do you want to add anything?

19 CHAIRMAN ZECH: Give your name for the reporter.

20 MR. GREENMAN: Ed Greenman, Region III, Deputy  
21 Director of Projects. We've had a rather in-depth look at  
22 training ever since the July 1st incident. One of the things  
23 we found from the staff's perspective was that the shift  
24 personnel handled themselves quite well in dealing with  
25 transient situations. They did not, as you pointed out,

1 Mr. Commissioner, have the clearcut understanding on how to  
2 work together as a team.

3 The utility has done a number of things not only in  
4 working them on the simulator -- what I'll call enhanced  
5 simulator training -- they have brought the shift as a unit  
6 and the supervisors into work planning meetings, work study  
7 meetings; how to work not only within the Operations  
8 Department, that facet of the operation that they deal with,  
9 but in how to deal with all of the other departments that they  
10 have to interface with in order to understand other people's  
11 problems and how to work together more effectively.

12 Now we've reviewed some of the shifts, their  
13 performance on the simulator training. That has not been  
14 totally completed for all shifts yet but it will be prior to  
15 startup of the plant.

16 CHAIRMAN ZECH: Thank you. Proceed.

17 COMMISSIONER BERNTHAL: I would ask one question  
18 here. Am I to understand from all of this that the shifts,  
19 prior to this series of mis-steps, had never trained as shifts  
20 on the simulator? They had always trained as individuals? In  
21 other words, most plants -- I won't say all, but I think most  
22 of our plants, the shifts train as a shift on the simulator.  
23 At least at some point before they go into operation. Is that  
24 not the case here?

25 MR. KEPPLER: I think they have trained as shifts

1 but I think the emphasis was on training for accidents or  
2 accident conditions, and there was little attention given to  
3 the routine activities for normal operations. That's a  
4 perception that I have not only with this plant but with some  
5 other plants.

6 CHAIRMAN ZECH: Did somebody else want to back  
7 that up? Go ahead.

8 MR. GREENMAN: Yes, sir. While they were training  
9 as shifts, there was no real assurance at the time of that  
10 event that each member worked the correct position in the  
11 shift that he was assigned to, nor was the STA or the SOA or  
12 the reactor engineer for that matter, although the reactor  
13 engineer's involvement at very, very low power -- he becomes  
14 much more important at different phases of power escalation.  
15 But that had not been done at that time.

16 COMMISSIONER BERNTHAL: How come we didn't pick that  
17 up ahead of time? That's something that I thought was  
18 considered to be a fairly standard part of training; that you  
19 get your people together in their spots training as a shift,  
20 in the way that that shift is going to run the plant.

21 COMMISSIONER ASSELSTINE: Fred, you know I remember  
22 at the INPO/CEO workshop last year there was a presentation on  
23 team training, and I got the clear impression from that that  
24 this was sort of an evolving concept. That in fact, by and  
25 large, most utilities did not do team training where you

1 brought everybody together and where you focused attention on  
2 the individual roles of every element, including the more  
3 support-oriented ones like advisors, engineers, STA's even in  
4 some instances.

5 So I guess my impression was a little different;  
6 that perhaps this is more of an evolving thing rather than the  
7 common practice. I think it's something that's very  
8 important.

9 COMMISSIONER BERNTHAL: Well, I don't think we're  
10 getting to the root of this. I have to say, I don't think  
11 we'll live to see the day when we have a problem at a plant  
12 that we can't walk away and say, that's a management problem.  
13 That's easy to say. In fact, I can't remember a problem plant  
14 where we've been able to walk away and say that was a hardware  
15 problem, and I doubt that that will ever happen.

16 The one word that it seems to me runs throughout all  
17 of this analysis is inexperience. And I thought we might have  
18 something here, team work, although I'm -- you're really  
19 talking about how human beings interact, and when the day  
20 comes that we get good at predicting that, I'll be very  
21 pleased that we're all experts in management to an extent that  
22 I doubt we'll ever be.

23 MR. STELLO: Let me make a point here addressing  
24 what Commissioner Asselstine raised in the beginning. I think  
25 the utility spent a lot of time and energy building that

1 plant and didn't really appreciate the enormous energy it  
2 takes to operate it and make that transition -- with the time  
3 and care that he put into building the plant, he built it and  
4 did a fine job of building it. And I think perhaps that was a  
5 result of much of what went behind the compliments of the  
6 Commission; they did do a very good job and I don't think we  
7 ought to hesitate to say so.

8 But there are a lot of plants that have not made  
9 that transition from construction to operation. I think  
10 that's part -- I don't know if it's all of the problem but  
11 it's certainly a part of that problem and they're learning.  
12 They're learning now and have so painfully.

13 But with respect to team training, I think that  
14 there is routinely team training when you have teams. I think  
15 when you're licensing operators you never know which operators  
16 are going to get through the process and which ones won't, so  
17 there's an awful lot of individual training in preparation for  
18 the examinations.

19 But when you get to the requalification issue where  
20 the shifts then exist and are being requalified as shifts,  
21 then you tend to concentrate -- and that's what was being  
22 picked up in the CEO workshops. That as the shifts now  
23 go to requal training, as each plant has six shifts and  
24 rotates once every month or so, that they are emphasizing and  
25 picking up on requal. But that's awful hard to do with new



1 people coming in when you don't know which ones will or won't  
2 be on the shift. And I think that explains a plant coming  
3 through a process where it's something that we do have to give  
4 more attention to because it's harder in fact to get the team  
5 put together early enough to give them the training.

6 COMMISSIONER ASSELSTINE: Even there I think you  
7 still have questions about support organizations like  
8 engineering and STA, and there's wide variation even on equal  
9 I think on the extent to which those people are involved in  
10 the formal retraining program as opposed to licensed  
11 operators.

12 MR. STELLO: But I think we're doing a fairly good  
13 job in that area now, and I'm sure we're going to do better.  
14 But I'm pointing out it's much more difficult to do that with  
15 respect to a plant going through an initial licensing process.

16 COMMISSIONER ASSELSTINE: Yes, true.

17 CHAIRMAN ZECH: I have two quick comments. First,  
18 you're absolutely right that the transition from construction  
19 to operation for any plant is a real challenge. And if I  
20 recall, when I visited out there at Fermi, in my closing  
21 remarks I emphasized that, and have in many, many other plants  
22 throughout the country.

23 It is a challenge to go from construction to  
24 operations, and it's a mentality, it's not easy. But the big  
25 thing that helps there is experience, because people who have

1 done it before can appreciate the difference. So when you  
2 don't have experience it's even more of a challenge, but it  
3 certainly is a challenge.

4 The second thing is about any procedural operation  
5 -- startup -- if you can do it on the simulator, you take your  
6 whole team out there and do it on the simulator first. Now  
7 some of these things you can't do on the simulator because  
8 they don't lend themselves to -- all the instrumentation and  
9 so forth. But if you could do it on a simulator, you should  
10 practice these things with your team ahead of time. If you  
11 can't do it on a simulator, you should get and have a skull  
12 session with all of your people on your shift and go through  
13 just -- you know, here's what we're going to do, we're going  
14 to pull rods, we're going to do this when this happens, expect  
15 this to happen.

16 So everybody knows so you talk it about ahead  
17 of time. That's kind of the approach that I think should be  
18 taken on most of these key operations when they're starting up  
19 the plants, especially when you don't have a lot of  
20 experience. It just makes kind of common sense to me that  
21 that's the kind of a procedure you'd use.

22 So we are getting more emphasis on team training,  
23 and I think that's the right approach to take. But until we  
24 get there, certainly there are provisions that you can make  
25 that can be very helpful. If you can't do it on a simulator



1 and practice these things, then you should get together and  
2 talk it through for several hours so everybody knows what to  
3 expect. And then perhaps you don't have as many surprises.

4 But anyway, it's just attention to detail, same old  
5 thing. Discipline. Nothing complicated about it. It's just  
6 really a hardnosed approach to knowing what you're doing, and  
7 making sure you can anticipate the reactions of this  
8 complicated technology. This is why training is so important,  
9 in my view.

10 Well, we've interrupted you too much.

11 MR. KEPPLER: But could I add one more point,  
12 though?

13 CHAIRMAN ZECH: Go ahead.

14 MR. KEPPLER: Again, getting back to the question  
15 that was put on the table at the beginning of the meeting,  
16 it's still very hard to predict that ahead of time. You wind  
17 up -- this company had one of the best passing rates of all  
18 the operator exams in the country.

19 COMMISSIONER ASSELSTINE: That's right.

20 MR. KEPPLER: This company had a plant that looked  
21 second to none in terms of cleanliness. This plant had a  
22 management system that looked good to everybody.

23 CHAIRMAN ZECH: But they weren't experienced. That  
24 makes a big difference.

25 MR. KEPPLER: I agree, but we've also had other

1 plants that weren't experienced. Callaway is a good example.  
2 They started up and didn't fall flat on their pants.

3 CHAIRMAN ZECH: But we have had others who did have  
4 trouble starting up. So the point is when you don't have  
5 experience you try to compensate for it in some way.

6 Now, Callaway did do some things to compensate for  
7 it. They got extra inspection teams in there and so forth.  
8 And perhaps that helped a bit, I think it did.

9 But in any case, when you don't have experience, you  
10 should do something to try to compensate for it; more than  
11 just kind of hope for the best. And I think that that's a  
12 very important lesson not only for all in the industry but for  
13 all of us to learn, too. That when you don't have the  
14 experience, then you should be especially vigilant. And I  
15 think that's all we're really trying to say here.

16 And certainly, the company did a marvelous job in  
17 construction, we all agreed on that. But operations is not  
18 construction; it's a different ballgame, and that's very  
19 difficult for an inexperienced organization, in my view, to  
20 comprehend. But it's quite different when that plant comes to  
21 life from when it's sitting there rather inert.

22 MR. KEPPLER: I'm not trying to be defensive with my  
23 comment, but as we have other plants that will come along -- I  
24 will be coming forth before the Commission on Perry, and we  
25 are going to revisit the same thought with Perry.

1 CHAIRMAN ZECH: Well, but I hope we have learned  
2 something.

3 MR. KEPPLER: I hope we have, too. But trying to be  
4 able to see through it is very hard.

5 CHAIRMAN ZECH: But that's what we're going to try  
6 to do.

7 COMMISSIONER BERNTHAL: Well, I would just like --  
8 without prolonging this too much -- I haven't heard anything  
9 yet that anyone has said that they are willing to stand up and  
10 say, we should have seen this a long time ago. I can think of  
11 one or two little precursors. They were having security  
12 problems way back when I visited that plant. You might have  
13 said, well, there seems to be an organization problem here,  
14 but I think -- Jim started out by asking the question, how  
15 come we didn't see this coming down the track.

16 COMMISSIONER ASSELSTINE: Yes.

17 COMMISSIONER BERNTHAL: I haven't heard the answer  
18 yet. I'm not sure I'll hear the answer.

19 COMMISSIONER ASSELSTINE: Well, we may not.

20 COMMISSIONER BERNTHAL: I have a feeling we won't.

21 COMMISSIONER ASSELSTINE: That's interesting in  
22 itself.

23 COMMISSIONER BERNTHAL: We're talking about  
24 something we're not very good at here.

25 CHAIRMAN ZECH: Well, if you can't foresee into the

1 future -- and we're not very good at that -- we're going to  
2 try to do better by looking at the past. But this is not an  
3 operational plant so you don't have any record to go on.

4 But the only thing you can do is be cautious about  
5 when you're inexperienced, and certainly you can't predict a  
6 lot of these things but you can say -- you know, if you have  
7 an inexperienced group of people, even though they've done a  
8 commendable job building the plant, you've just got to say go  
9 slow, be careful; this is a demanding technology by the  
10 numbers. And I think those are the kind of attitudes that  
11 will help. It won't necessarily cure the problem always, but  
12 will help in many cases.

13 So that's all you can say, I think. You can't look  
14 into the future, you don't have a crystal ball, but you can  
15 try to say if you're inexperienced, you should be more  
16 cautious and more careful. I think that's an important  
17 lesson, if we don't learn anything more than that.

18 MR. KEPPLER: Well, when I come before the  
19 Commission on Perry, you will see that we've tried to take  
20 what we've learned from Fermi and apply it to Perry.

21 CHAIRMAN ZECH: Good. Well, let's move. We've  
22 taken your 30 minutes already.

23 [Slide.]

24 MR. KEPPLER: Over the last several months, a number  
25 of issues surfaced at Fermi in terms of the adequacy of

1 reviews of design changes issued since 1984, and in  
2 particular, the seismic and environmental verifications.  
3 There were concerns about the adequacy and completeness of  
4 engineering calculations to reflect as-built conditions.  
5 Concerns about whether deviations that were made from the  
6 small bore pipe design manual were done with sufficient  
7 justification. There was potential overloading of embedment  
8 plates, potential problems with the Nelson studies on  
9 embedment plates, and incompleted engineering work that was  
10 outstanding at the time of licensing.

11 In terms of what was done, a very extensive effort  
12 was put in place over the last several months to review and  
13 verify all modifications made during this time period. They  
14 went through a few thousand document packages and they  
15 identified only a very limited number of deficiencies; of the  
16 order of half a dozen to a dozen deviation reports had to be  
17 issued. And only three hardware problems were identified, and  
18 these are in the process of being resolved.

19 The company did update all their design calculations  
20 to make sure that the as-built configuration was in fact  
21 covered.

22 In the case of embedments, some of those were not  
23 safety qualified, and they had to look at those. They did  
24 some sampling, UT testing, pull testing on a representative  
25 sample and resolved that issue.

1           They brought in Stone & Webster to look at their  
2 system of performing reviews and had Stone & Webster take one  
3 complete system from start to finish, which was the core spray  
4 system, to make sure there were no additional problems not  
5 already known. The company upgraded their design controls  
6 from here on to make sure that qualified people look at all  
7 design changes and that the sign-offs are appropriate.

8           We had a meeting in our office I believe it was last  
9 week, maybe the week before, to go through this in some  
10 detail. I am not doing the amount of review justice by my  
11 comments, but it's a fairly thorough effort. I took one of my  
12 most experienced and critical design engineers to review this  
13 effort; I brought Isa Yin into the picture, and Isa provided  
14 some comments for the utility and Stone & Webster, but in  
15 general is satisfied with the review and we have signed off  
16 on this job.

17           [Slide.]

18           Security. Problems with security have ranged all  
19 over the place. There have been a large number of allegations  
20 about security problems. There have been problems with  
21 falsified security documents. The security group has not been  
22 successful at identifying problems. There seems to be a poor  
23 working team relationship between the security organization  
24 and the guard force, and our inspections have identified  
25 numerous violations of security requirements.

1           COMMISSIONER BERNTHAL: What was, broadly speaking,  
2 the nature of these security problems? I have heard security  
3 problems said a lot here, but what was the nature of those  
4 problems?

5           MR. KEPPLER: Well, the security plan just is not  
6 being implemented, and I think the problem is tied to the  
7 relationship between the security organization within the  
8 company and the guard force. They just have not been  
9 successful in implementing the security plan. And, I would  
10 say, in motivating the security guard staff.

11           I don't treat the problem as a major shortcoming in  
12 the security of the plant, but at best, the security program  
13 is a SALP-3 rating. Despite the efforts to improve it, it is  
14 still a SALP-3, and they're going to have to work on it to  
15 bring it up. And the company is committed to doing that.  
16 They have -- the last I heard, they had advanced an offer to  
17 an experienced security director. The company may be able to  
18 comment on that for you today.

19           We issued a civil penalty in this area. We have met  
20 with the utility to require them to upgrade its security in  
21 certain areas, and we have put additional inspection effort  
22 into this area.

23           CHAIRMAN ZECH: Let's move along.

24           COMMISSIONER ASSELSTINE: Well, before we leave  
25 security, right now they don't have the experienced security



1 director in place --

2 MR. KEPPLER: That's correct.

3 COMMISSIONER ASSELSTINE: -- that they are looking  
4 for. You say despite all their efforts they are still a 3 on  
5 security program. What's the basis for assurance that the  
6 security program is going to function effectively over the  
7 next few months if you let them start the plant?

8 MR. KEPPLER: I think you will find that they will  
9 be moving a director in very soon. I think it's just a short  
10 period of time.

11 The basis for continuing ahead, as far as I'm  
12 concerned, is my staff has required upgraded measures in  
13 security, the company submitted a Security Improvement Program  
14 and we are verifying that that is being carried out. But  
15 despite this -- I don't want to leave you with the wrong  
16 impression -- there are still problems; they are just not to  
17 the point that I would put that as a hold for startup, in my  
18 judgment.

19 COMMISSIONER ASSELSTINE: Okay.

20 [Slide.]

21 MR. KEPPLER: Lastly, the hardware issues. Very  
22 briefly, at the time that the plant was shut down in October  
23 they had cracked turbine bypass piping. That has been  
24 replaced with thicker-walled piping. I must tell you that  
25 there is still some concern whether this fix will solve this



1     problem, and this piping is instrumented. They will monitor  
2     the vibrations during startup and see where that goes.

3             The diesel generators -- you may recall from  
4     previous meetings there were a number of problems with  
5     bearings. The bearings have been replaced. There have been  
6     demonstration tests done on two of the diesel generators to  
7     the satisfaction of the staff. I believe an SER has been  
8     written or will be written or will be issued shortly, and that  
9     issue is closed as far as the staff is concerned.

10            The RHR pump motor problem was fixed. It was a  
11     manufacturing problem. The second RHR pump was checked out by  
12     GE and that's okay.

13            They broke a handful of springs in the main steam  
14     isolation valves. Those have been replaced and they tested  
15     the others at in excess of operating stresses, and that issue  
16     has gone away.

17            All of the EQ and Appendix R modifications have been  
18     completed with one exception, and that is that the backup  
19     power supply for the remote shutdown panel is still under  
20     review by the staff. Do we have a comment on that?

21            CHAIRMAN ZECH: Identify yourself, please.

22            MR. LYNCH: Dave Lynch, Project Manager for  
23     Fermi-2. We think we have a resolution for those issues. The  
24     utility will be documenting those resolutions this week in a  
25     letter.

1           CHAIRMAN ZECH: Thank you.

2           COMMISSIONER ASSELSTINE: Will that be closed out  
3 before startup?

4           MR. LYNCH: Yes, they will be.

5           COMMISSIONER ASSELSTINE: Are they requesting an  
6 exemption?

7           MR. LYNCH: No.

8           COMMISSIONER ASSELSTINE: So they will be in  
9 compliance with the rule on remote shutdown?

10          MR. LYNCH: Yes. They will have a deviation request  
11 on a minor matter.

12          CHAIRMAN ZECH: Thank you.

13          MR. KEPPLER: Okay. I mentioned that they completed  
14 the source change-out during this last outage, and that went  
15 smoothly. And there is one issue that I have listed as  
16 unresolved at the time that relates to the degraded grid  
17 voltage problem that surfaced as a result of the engineering  
18 reviews that were done by the company.

19          The setpoints on low voltage are -- in the tech  
20 specs are 89 percent, and the recalculations indicate the  
21 value should not go below 95 percent to protect equipment. My  
22 understanding is that the staff has some concerns with this  
23 and they're reviewing it with the company, but it relates not  
24 so much as a safety concern but more of -- there will be more  
25 challenges to the equipment with these setpoints.

1           Dick, do you want to add anything?

2           MR. VOLLMER: Well, this is for Division I. When it  
3 reaches the under-voltage setpoint, then it would transfer  
4 power from its normal sources into emergency sources, start  
5 the diesel generator and so on. They found that certain of  
6 their equipment did not have the capability that they could  
7 demonstrate that it would start at the 89 percent setpoint  
8 rather than the 95 percent.

9           So it requires a tech spec change. They have given  
10 the staff a submittal, and we're pretty well through our  
11 technical review of that. And restart would await a tech spec  
12 change unless the staff finds additional technical problems.

13          CHAIRMAN ZECH: All right. Thank you.

14          COMMISSIONER ASSELSTINE: One last quick question,  
15 Jim, on this. Particularly when you look at the first four  
16 items on that list -- are those typical or usual kinds of  
17 hardware problems that you'd expect to see in the startup of a  
18 plant, or do you think they're unusual?

19          MR. KEPPLER: I would say they're unusual.

20          COMMISSIONER ASSELSTINE: Is that indicative of what  
21 we all thought; that this is a well-constructed plant?

22          MR. KEPPLER: No, I don't think it bears on that.  
23 The problem with the pump motor and the MSIV springs were  
24 manufacturing defects. The problem with the turbine bypass  
25 piping, they have used an English generator. They've got a

1 system that's not used with any experience in this country,  
2 and I can't -- I think that's more of a design problem than a  
3 fabrication or installation problem.

4 And the diesel problem, I don't have a good answer  
5 on, why those problems occurred.

6 COMMISSIONER ASSELSTINE: Refresh my memory --

7 MR. KEPPLER: The bearing problem, that's Colt  
8 Industries, Fairbanks-Morris.

9 COMMISSIONER ASSELSTINE: Okay. But you've  
10 typically not had widespread problems.

11 MR. KEPPLER: Yes. But they have provided diesels  
12 for other plants in the country, yes. So I don't have an  
13 answer on that.

14 COMMISSIONER ASSELSTINE: Okay.

15 [Slide.]

16 MR. KEPPLER: Major items before startup.  
17 Obviously, the remaining engineering and technical issues that  
18 we have talked about here have to be cleaned up before  
19 startup. The Independent Overview Committee needs to make a  
20 recommendation to the CEO of the company. We will be  
21 interested in that.

22 I have met with the Independent Overview Committee  
23 and have the benefit of their thinking. I have a meeting set  
24 up on July 17th, next week, to brief the Monroe County Board  
25 of Commissioners up in Monroe, Michigan, which was a

1 commitment I made early in the game, and we will also have one  
2 public meeting up at the plant to discuss the resolution of  
3 the remaining items.

4 The Chief Executive Officer will make his  
5 authorization to restart, and the NRC. And I guess, if I  
6 could respectfully make a comment here, the Commission has  
7 from time to time been concerned about the staff taking  
8 decisive action before the plants get into serious problems,  
9 and I think we did that in this case. The plant has never  
10 gone above 5 percent power.

11 So I would urge that the Commission give strong  
12 consideration to keeping the restart issue with the staff.

13 [Slide.]

14 Just to touch on -- there are some other things to  
15 close the story here. We are still carrying out -- the agency  
16 is still carrying out some investigations at the plant that  
17 relate to matters that I'm sure Mr. Hayes has talked to you  
18 about so I won't go into them here.

19 The Department of Justice review on the rod pull  
20 error culminated last week, and they declined that case.

21 On enforcement actions, we issued the enforcement  
22 action for the rod pull error last week. The Commission  
23 should know that there will be at least one more escalated  
24 enforcement action to be taken for problems subsequent to the  
25 rod pull error that we haven't gotten out yet. So when you

1 see that coming, I don't want you to be caught offguard.

2 The staff still has under review the 2.206 petition  
3 that was submitted by the intervenor groups, and that is under  
4 review. I put down also, Mr. Chairman, the INPO review  
5 because I remember you had some very strong points to make on  
6 that. And INPO was at the site last week, so you might want  
7 to talk to Mr. McCarthy today about that.

8 CHAIRMAN ZECH: Fine.

9 MR. KEPPLER: In terms of plans, just very briefly,  
10 we are treating this plant like it's a new plant in terms of  
11 inspection activities for restart. There will be an augmented  
12 inspection coverage under the direction of Mr. Greenman, and  
13 we will be covering the plant extensively during startup. And  
14 based upon performance, we will adjust our program  
15 accordingly.

16 And the plans for startup call for a phased control  
17 of startup, at which time a decision is made first to start  
18 the plant and progress to a certain plateau. Those results  
19 will be reviewed to make sure that they are satisfactory to  
20 the company. The CEO will authorize progression to the next  
21 step, and the NRC is in that chain as well.

22 So we plan to monitor the startup very closely when  
23 we see the plant ready, and if problems develop I won't  
24 hesitate to take the kind of action I took last time.

25 CHAIRMAN ZECH: Fine.

1 MR. STELLO: That concludes our presentation,  
2 Mr. Chairman.

3 CHAIRMAN ZECH: Good. I'd like to move along unless  
4 my fellow commissioners have any objection to that.

5 COMMISSIONER ASSELSTINE: A quick question if I  
6 could. On the question of management, I take it you have had  
7 ample opportunity to look at the Independent Overview  
8 Committee's report, and you basically agree with their  
9 characterization, at least of the former management of the  
10 plant and the problems that existed?

11 MR. KEPPLER: Yes. Yes. I think that I have some  
12 further reservations, but -- and I think that the company is  
13 aware of their inexperience, and I would expect that if  
14 problems continue, you may see some more changes.

15 COMMISSIONER ASSELSTINE: Okay. I guess one of the  
16 questions I still have -- it's the one I put on the table at  
17 the outset, and that is, when I looked through this list of  
18 management problems, I guess I wonder why we didn't pick up on  
19 at least some of those; some of those that seem to me to be  
20 the kinds of things that we might be looking for. Conflicts  
21 between support organizations, failure to give subordinates --  
22 tell them what their responsibilities are. Confusion about  
23 what people are supposed to be doing. Those kinds of things,  
24 it strikes me, are not so esoteric, management considerations  
25 that perhaps we shouldn't have tumbled to some of them.



1 I guess I just --

2 MR. KEPPLER: Well, I can't give you a good answer,  
3 Commissioner. I am just as dismayed about this thing as  
4 everybody else is. We sent up a team two weeks before the  
5 plant was licensed to observe activities, to observe  
6 communications, the way people interfaced with each other, and  
7 I can't tell you why we didn't pick it up.

8 MR. STELLO: I think we need more time to think it  
9 through, as I said before. I don't know that there's an easy  
10 answer. Our goal is to catch everything, but we are realists,  
11 we know we're not going to.

12 I suggest that a plant that does as well in  
13 construction as they have -- and they have done well -- that  
14 transition is a difficult one and not an easy one. And they  
15 clearly didn't do what they needed to do to be ready. Now,  
16 should we have really identified the key elements  
17 retrospectively? Yes. But that's always the case.

18 I think we need to look further to find out is there  
19 something in our inspection program or something that we ought  
20 to be more sensitive to that we are not that would make a  
21 difference in the future. I think that deserves much more  
22 thought than we can give at this table.

23 COMMISSIONER ASSELSTINE: I agree with you. I think  
24 it's something that ought to be looked at a bit more  
25 carefully.

1           Well, I think -- and I was one of the culprits. I  
2           thought that I had some indicators, many of the same ones that  
3           Jim mentioned earlier, about how they would do in operations  
4           that weren't tied so much to the construction program but were  
5           the kinds of things that seemed to focus more on plant  
6           operations. And I'll be the first to admit that I was fooled  
7           as much as anybody.

8           And I guess what I'm wondering is if we weren't  
9           looking at the right things. And what I want to make sure of  
10          is that in the future that we are looking at the right things  
11          so that if there are problems like this out there, hopefully  
12          we can try and pick them up.

13          CHAIRMAN ZECH: Well I agree. I think it's  
14          certainly a very thoughtful suggestion, and we all know how  
15          difficult the answer is. But if there is a way we could learn  
16          from this and how could we have done it better, I think we  
17          should all think about just exactly that. I think that's what  
18          Commissioner Asselstine is saying, and I support that effort.

19          COMMISSIONER ASSELSTINE: As Jim says, we've had  
20          inexperienced utilities before that have done pretty well.

21          CHAIRMAN ZECH: Right. Maybe we can look and see  
22          perhaps why they did well and why the others didn't. But I  
23          think it will certainly be valuable if we could learn from  
24          this. And I think we should put some effort into doing so if  
25          we possibly can.

1 MR. STELLO: We will.

2 COMMISSIONER ASSELSTINE: The same question on the  
3 design problems. To what extent were these things surprises  
4 to us after the plant got its license? To what extent were  
5 they surprises to the Licensee? Did they know about these  
6 things ahead of time and just dismiss them as not being  
7 important, or did they not know about them ahead of time? And  
8 what assurance do we have now that we really have identified  
9 all the problems, that they don't exist in other systems of  
10 the plant, and that they have all been fixed?

11 MR. KEPPLER: Well, I think the last question we  
12 have a good answer to, and that is we know that all the  
13 safety-related systems have been looked at for design changes  
14 that took place when this issue came into question. What  
15 contributed to this was the fact that there were more than one  
16 AE at this plant, and in fact, there may have been four  
17 different engineering groups involved overall through the life  
18 of this. And when calculations or when areas were reviewed,  
19 they were acceptable for what each AE did up to a point. But  
20 one AE picking up on the changes of other brought into  
21 question whether or not you had the final as-built  
22 configuration thoroughly analyzed.

23 And in terms of why some of the design calculations  
24 weren't done when in fact the Licensee portrayed to us a  
25 completed project, is a matter that I've got OI looking at.

1 I'd just as soon drop it right there.

2 COMMISSIONER ASSELSTINE: Okay. All right.

3 CHAIRMAN ZECH: Any other questions?

4 [No response.]

5 All right, thank you very much.

6 Mr. Jack Calhoun is scheduled next, the Chairman of  
7 the Independent Oversight Committee for Detroit Edison. Would  
8 you come up, please?

9 Thank you very much for being with us today. You  
10 may proceed.

11 MR. CALHOUN: I intend to finish in 15 minutes.

12 CHAIRMAN ZECH: Thank you.

13 MR. CALHOUN: I first want to point out a little bit  
14 about the committee and then I'll go through some of the  
15 things that we found wrong with the plan. And then I will  
16 give you our impression of what we think the status of the  
17 plant is and the management.

18 The overview committee had its first meeting in  
19 January of this year and, as you know, we were asked to  
20 provide guidance to the Chairman and the Board of Directors in  
21 the areas of management related to training, operations,  
22 engineering and security.

23 The Independent Oversight Committee consists of six  
24 members with each having at least 25 years of experience in  
25 nuclear plant operations or engineering. And much of this

1 experience has been in the area of management.

2 I am Jack Calhoun, Chairman of the Committee. I am  
3 presently employed as a Senior Vice President for the General  
4 Physics Corporation. I have had 26 years in nuclear  
5 operations and maintenance at two utilities, TVA and  
6 Pennsylvania Power and Light Company.

7 We also have Mr. Saul Levy, President of the Levy  
8 Corporation. And he is an ex-General Electric employee with  
9 over 30 years experience. He was one of the principal  
10 engineers who developed the large Fermi type boiling water  
11 reactors. Saul also has had extensive experience as a  
12 consultant to the industry. For instance, he was a consultant  
13 to the Kemeny Commission after the TMI accident.

14 Mr. Jim Green, private consultant, 30 years nuclear  
15 operations and maintenance experience, 10 years with the  
16 U.S. Navy and 20 years with the Tennessee Valley Authority.

17 We have Mr. Jim Neeley, President of Nuclear Power  
18 Consultants Company, with over 25 years experience in nuclear  
19 engineering and management, relating to both water cooled and  
20 gas cooled reactors.

21 Mr. Leo Lesser is presently an employee of the  
22 Management Analysis Company. He has 30 years experience in  
23 nuclear operations. He is an ex-superintendent of the Cooper  
24 Nuclear Plant and he was a General Electric employee in  
25 Richland, Washington, where he was an operations supervisor at

1 the Hanford reactors.

2 The last of the group of six is Mr. Murray Miles,  
3 ex-Navy with over 25 years experience with Admiral Rickover.  
4 And he was responsible to the Admiral for the development of  
5 nuclear technology, especially the technology relating to  
6 radiological protection. Presently, Murray is a consultant to  
7 the industry in radiological protection.

8 The Oversight Committee gave its initial assessment  
9 report to the Detroit Edison Chairman and the Board of  
10 Directors in early February of this year. Our findings, which  
11 were in considerable detail, pointed out a lack of management  
12 effectiveness, which we believe to be caused by poor  
13 leadership, lack of teamwork, and the need to have more  
14 management with recent commercial nuclear plant operating  
15 experience.

16 Our review of the management at Fermi was expedited  
17 because four of our members were already in key monitoring  
18 positions to observe the company activities. Three are  
19 regular members of the Fermi Safety Review Board and one  
20 member is a full time advisor to the plant manager.

21 COMMISSIONER ASSELSTINE: That is Leo Lesser?

22 MR. CALHOUN: That is Leo Lesser, yes, sir.

23 Briefly, the Committee findings were -- and most of  
24 these have already been mentioned -- there was a lack of  
25 commercial operating experience. However, some of the



1 employees had had Naval operating experience and several of  
2 the supervisors had assignments for short periods of operating  
3 plants.

4           Fermi-2 leadership seemed to be lacking. Management  
5 or managers were reluctant to define goals. The  
6 accountability of managers and supervisors was missing in some  
7 cases. Managers failed to hold subordinates accountable.  
8 There was management ineffectiveness, lack of effective  
9 teamwork. Planning did not seem to be effective. There was  
10 an excessive amount of time taken to implement important  
11 management directives.

12           Also, regarding the organization at Fermi-2, the  
13 division of responsibility was not well balanced in the  
14 engineering group. The quality assurance organization did not  
15 report to a level of management consistent with the emphasis  
16 placed on quality. In the area of management systems,  
17 administrative procedures and controls seemed excessively  
18 rigid. There was no integrated system for planning and  
19 schedule. We asked the company to make a written response to  
20 each of the management deficiencies I just enumerated.

21           Also, we made six specific recommendations. Hire  
22 one or more people with commercial operating experience to  
23 head key positions. Provide an advisor to the Vice President  
24 of Nuclear Operations with previous commercial experience.  
25 Emphasize to all side organizations the need to fully support



1 the plant manager. Establish challenging performance goals at  
2 all management levels with performance indicators to measure  
3 progress in achieving these goals. Fifth, reorganize the  
4 nuclear engineering department. And sixth, acquire an  
5 experienced security professional to advise the security  
6 organization.

7 The company has responded in a responsible and  
8 effective way to our recommendations. Senior management has  
9 developed an acceptable program to prepare for plant restart  
10 and to carry out the testing required during the startup  
11 program. This is reflected in the changes made in management  
12 staffing and in the organizational reporting lines, as well as  
13 the several improvement plans put in place since NRC issued  
14 the 54(F) letter.

15 Progress has been made in implementing these plans  
16 and there is a noticeable improvement in management  
17 effectiveness since we made our first report to the Chairman.  
18 And more specifically, there is a maturing of plant  
19 management, as evidenced by a take charge attitude, the  
20 attention given to detail and assuring of the sensitivity  
21 necessary to satisfactorily carry out NRC safety regulations  
22 and reporting requirements.

23 Improvement plans have been implemented that define  
24 mission and goals and performance standards. There is  
25 evidence that efforts are being made to communicate these

1 plans downward through the plant and department  
2 organizations. As Jim just mentioned, two important training  
3 programs have been implemented to improve plant operation.  
4 Plant licensed operators and other shift members, such as the  
5 nuclear engineers and the technical advisors, are being  
6 trained to operate as an integrated shift team.

7 Plant operators are being given structured, formal  
8 training in the elements and techniques of good plant watch  
9 standing. Special emphasis is being given to this training  
10 for the non-licensed operators. These two programs should  
11 significantly reduce operator errors.

12 There is evidence the company is implementing plans  
13 to hold individuals accountable for their actions. Better  
14 team performance is evident between the operating,  
15 engineering, quality assurance and maintenance organizations.

16 In response to our recommendation to obtain outside  
17 commercial operating experience, to fill key management  
18 positions, and to improve the overall management at Fermi, the  
19 company has hired additional people with previous commercial  
20 operating experience and has made several organizational  
21 changes.

22 For instance, through the expeditious efforts of the  
23 Chairman of the Board and the President, the company has  
24 implemented the Overview Committee's recommendation to recruit  
25 a top level manager with commercial nuclear operating

1 experience. Mr. Ralph Sylvia, formerly with Virginia Electric  
2 Power, has been hired to head the nuclear department. As the  
3 Group Vice President Nuclear, Mr. Sylvia reports directly to  
4 the Chairman of the Board and we feel that this was the  
5 priority action necessary to improve the management  
6 performance of the Fermi-2 organization.

7 Also, 14 other people with outside experience have  
8 been hired since January. The company is presently searching  
9 for a vice president for engineering services and a nuclear  
10 security professional. There is evidence the search will soon  
11 be successfully completed.

12 The reporting of the plant support organization has  
13 been changed to have it report directly to the plant manager.  
14 This strengthens the manager's control of activities for which  
15 he is ultimately responsible. The Director of Nuclear  
16 Engineering has been replaced.

17 And as Jim said, the Quality Assurance organization  
18 at one time reported to the President of the company and that  
19 reporting organization has now been changed to report directly  
20 to Mr. Sylvia.

21 A new Supervisor for Simulator Training has been  
22 appointed and he reports directly to the Vice President of  
23 Operations, thereby putting additional emphasis on training.  
24 The Radiation and Chemistry Supervisor now reports directly to  
25 the plant manager.

1           Thus, good progress is being made on implementing  
2     the remainder of our recommendations and several other  
3     beneficial improvements have been made that were not the  
4     result of our findings. And there were several of these.

5           Before restarting Fermi-2, the Independent Overview  
6     Committee requested that Detroit Edison provide the Committee  
7     written justification for their readiness to restart the  
8     plant. We asked that their justification address both  
9     material conditions and performance and should clearly define  
10    the criteria on which management bases its decision to  
11    proceed. This justification, which provides more detail than  
12    given in this report, has been written and made available to  
13    the Overview Committee. A copy has been or will be given to  
14    Mr. Keppler of Region III.

15           This completes the Independent Overview Committee  
16    report. In summary, we believe the Fermi management team has  
17    a satisfactory plan in place, the necessary sensitivity to  
18    good management practices, and the ability to successfully and  
19    safety resume the operation of Fermi-2.

20           We will continue to advice management and monitor  
21    their progress. That completes the report.

22           CHAIRMAN ZECH: Thank you very much. Questions from  
23    my fellow Commissioners?

24           COMMISSIONER ASSELSTINE: I just have a few.

25           Six months is a pretty quick time to turn around the

1 range of management problems that you identified in your  
2 report last January. Let me say, at the outset, that I  
3 thought your report was an excellent one. It was a very  
4 candid and open discussion of the situation. I found it very  
5 helpful and very thoughtful.

6 I wonder if you could, though, give me a few  
7 examples of how, over a six month period of time, things have  
8 changed in some of these areas, like accountability. You said  
9 that there is evidence of greater accountability, people are  
10 being held accountable for their actions. Could you give me a  
11 few examples of what's being done?

12 MR. CALHOUN: The company has gone to each one of  
13 the managers and specifically gave them -- stated their  
14 responsibilities and has established their annual work -- what  
15 they're supposed to do for the year. And it's written and  
16 they follow up on it. I think they will monitor every three  
17 months.

18 One of the key things, I think, for Fermi is that  
19 essentially they had a good crew. They had good bodies and it  
20 was a matter of proper leadership welding them into a team.  
21 And they are now having team building sessions, which I think  
22 that you have to do for a new plant, for the people to work  
23 together properly.

24 COMMISSIONER ASSELSTINE: What evidence do you see,  
25 in terms of day to day operations of the plant, of this new

1 teamwork? They're all working together now instead of  
2 working as a group of individuals.

3 MR. CALHOUN: Well, for one thing, they've  
4 reorganized so that the support group now reports to the plant  
5 manager. At one time, the plant manager didn't feel that he  
6 had the responsibility of running the plant. There were too  
7 many people telling him what he should do.

8 And by reorganizing and putting the support group  
9 under the plant manager, I think certainly his feelings about  
10 the plant has changed and I detect that that's so.

11 COMMISSIONER ASSELSTINE: Is he the guy in charge  
12 now?

13 MR. CALHOUN: He is the fellow in charge.

14 COMMISSIONER ASSELSTINE: And who is that now, in  
15 the current position?

16 MR. CALHOUN: Mr. Leonard. He's the plant  
17 superintendent, plant manager as he's called at Fermi.

18 COMMISSIONER ASSELSTINE: The same guy as at the  
19 time of licensing?

20 MR. CALHOUN: Yes.

21 COMMISSIONER ASSELSTINE: One of your other findings  
22 was that there is a reluctance to face facts, identify  
23 problems, establish their sources or root causes. Could you  
24 give me a couple of examples of how that's changed? That  
25 sounds almost like an attitude problem.



1           MR. CALHOUN: It would be hard for me to give you a  
2 good example on that one. Now the plant has addressed it in  
3 the report that's just been issued. They address it -- well,  
4 it really gets down to a sensitivity of the NRC requirements,  
5 is the way I look at it. They now know that they have to --  
6 when they run into a problem -- shut down and investigate it.

7           COMMISSIONER ASSELSTINE: And you feel that message  
8 has gotten across?

9           MR. CALHOUN: I see that message has clearly gotten  
10 across to the Fermi-2 people.

11          COMMISSIONER ASSELSTINE: One of your  
12 recommendations was to provide an advisor for the Vice  
13 President of Nuclear Operations, who is Leo Lesser. He was in  
14 a different capacity at the time that the plant got its  
15 license, at the time that the rod pull incident for example.  
16 What made you decide that he should be given a -- well, how  
17 does the role differ? And if it is a bigger role now, what  
18 made you feel that that should be something that should be  
19 done? And in particular, do you feel that he was listened to  
20 before?

21          MR. CALHOUN: We had a sense that he didn't talk to  
22 Vice President of Operations much, and Leo had the feeling  
23 that he wasn't listened to properly.

24          COMMISSIONER ASSELSTINE: Just in the rod pull  
25 incident or in general?



1 MR. CALHOUN: Well at the time it was a general  
2 feeling that Leo had, and I think that situation has improved  
3 considerably.

4 COMMISSIONER ASSELSTINE: Okay, good.

5 CHAIRMAN ZECH: Fred?

6 COMMISSIONER BERNTHAL: I have one question. You  
7 have been candid in your assessment and evaluation. I'm going  
8 to challenge you a little bit now. How many of these problems  
9 do you think you would have picked up and how close to today's  
10 report would a report have been if you had done it a year  
11 before you did it?

12 MR. CALHOUN: It really gets down to the thought  
13 that we have got to create a team that works together and  
14 somebody in charge that is sensitive to the NRC issues.

15 COMMISSIONER BERNTHAL: Do you think you would have  
16 picked up your --

17 MR. CALHOUN: I -- I'm not sure. Of course, I've  
18 been through it several times, and of course if I had put that  
19 priority and looked hard at it, I would have picked it up.  
20 But I'm not sure that I would have zeroed in on the priorities  
21 problem.

22 CHAIRMAN ZECH: Sounds like a pretty honest answer  
23 to me.

24 [Laughter.]

25 COMMISSIONER BERNTHAL: I was hoping you would say,

1 we sure would have, because --

2 [Laughter.]

3 MR. CALHOUN: If you point me in the right direction  
4 I would have. Here was a plant in trouble, definitely in  
5 trouble, and we went right to the heart of the matter.

6 But it's hard to see, as the Vice President in  
7 charge of the operation, to always be able to see really all  
8 such things.

9 COMMISSIONER BERNTHAL: Thank you.

10 CHAIRMAN ZECH: Well let me just thank you very  
11 much. I think you have done a great service not only for  
12 Detroit Edison Company but for all of us here, and a very  
13 thoughtful and useful report. Thank you very much.

14 MR. CALHOUN: Thank you.

15 CHAIRMAN ZECH: Mr. McCarthy, Chairman of the Board  
16 and Chief Executive Officer of Detroit Edison.

17 MR. MC CARTHY: Mr. Chairman and gentlemen, the  
18 first thing I'd like to do is introduce a gentleman who has  
19 been referred to at least twice today, Ralph Sylvia, who is  
20 our new Group Vice President for Nuclear Operations. And you  
21 have heard his qualifications and his past background in the  
22 nuclear business.

23 I'd like to say that Ralph Sylvia is not just a  
24 person who was hired to come in and spend a year or so at  
25 Detroit Edison and get us over what has been a very hard time;

1 this is a career move, a career job. He is a senior officer  
2 of our company and I expect him in the future -- and he has  
3 many years in his future I hope -- to advance in our company,  
4 not just solely limited to the nuclear business. And I say  
5 that because I personally don't believe very much in getting  
6 one-time shots in the arm and to look over and to do things  
7 and then go. And that's one of the reasons that our  
8 recruiting took a while. I think we did the right thing, and  
9 I'd like to ask Ralph to join me at this time if that's okay.

10 CHAIRMAN ZECH: Certainly.

11 MR. MC CARTHY: A number of you have raised the  
12 central management question about how did you miss the  
13 estimate of the performance of the nuclear operations crew at  
14 Fermi, and I assure you that you aren't asking that question  
15 anywhere near as hard as I have asked it, and how we have  
16 asked it of ourselves. It's a very complex thing.

17 I think Mr. Stello in his characterization of an  
18 organization that was a proficient professional doing a very  
19 good job in building the plant, had experience in building a  
20 plant -- and after all, it took a long time to do -- didn't  
21 make that transition to the operating mode.

22 I will say that right after we got our low power  
23 license, Mr. Keppler and Mr. Davis from Region III visited the  
24 plant and they told us that it was going to be a very hard  
25 transition, and I was in that meeting, Chuck Heidel, our

1 President, was in the meeting, Wayne Jens, Bob Leonard and  
2 Frank Agosti were in the meeting and we all heard that and we  
3 said yes, that's right, it's going to be a hard transition.  
4 And it turned out, as you have seen and as we have seen, to be  
5 more difficult and really very, very much harder than we  
6 thought it was going to be.

7 Sitting here this afternoon, I couldn't help but  
8 think that perhaps we as an organization that has been through  
9 a hard time, I think successfully, could perhaps work with NRC  
10 in the preparation of an analysis of what has gone on, what  
11 one should look for from your standpoint and from our  
12 standpoint, from the Licensee and from the regulator  
13 standpoint; something perhaps to produce and put on at the  
14 INPO/CEO meeting in the fall.

15 CHAIRMAN ZECH: I think it would be very useful.  
16 And don't just give it to INPO, give it to us, too.

17 MR. MC CARTHY: Okay. I think it would be useful.  
18 I think if we both were candid and introspective, I think we  
19 could go a long way toward helping people in the future.

20 One of the things we're doing -- and there's been a  
21 good deal of talk about the team operation -- we're trying  
22 something, we're trying to get our shift operations to look as  
23 much as possible like the quality circle idea that is used  
24 very successfully in Japan and has been used in some  
25 industries here. It struck us that the shift as a unit has

1 all the characteristics of a quality circle; they're together,  
2 they get to know each other, they have similar  
3 responsibilities, they can be compared to the other shifts so  
4 competition comes in, they have all the ideal  
5 characterizations of that.

6 And we are beginning a program that I think in a  
7 year or so will result really in a quality circle, a degree of  
8 excellence; how well did we do on our last rotation of shifts,  
9 what should we train for in our week of training that is  
10 interspersed with these things. I think it's an idea that we  
11 can develop, and I hope to be able to come back at some point  
12 and tell you how well that is working.

13 I think from the standpoint of factual material,  
14 Mr. Keppler and Mr. Calhoun have presented basically  
15 everything that I could present. I don't disagree with any of  
16 it. There's a little confusion about who the advisor to the  
17 Vice President of Nuclear Operations is, and perhaps a little  
18 confusion as to who Quality Assurance reports to now. Quality  
19 Assurance now reports to Ralph Sylvia, the group Vice  
20 President. For a while when I first took direct charge of the  
21 plant operation back in I guess it was January, I asked our  
22 President to assume that job to get the counter-balancing  
23 effect that I think is valuable in QA.

24 Mr. Heidel is still doing a monthly audit on quality  
25 assurance, again to bring an experienced engineering mind into

1       what's going on in QA.

2               My own feeling has been over the past I guess really  
3       three or four months one of tremendous improvement in morale  
4       and the way thing are looking at the plant and the way  
5       training has been going in particular. The training operation  
6       now on the simulator is being done as if that was the plant,  
7       not just the reactor that was going on. And there is much to  
8       be learned about using a simulator. Are there other  
9       communications beside just the reactor; what's going on  
10      outside the place.

11             So I think tremendous improvements have been made,  
12      and I have a very, very high level of confidence, and in a  
13      couple of weeks when the things that Mr. Keppler described to  
14      you that are ongoing are completed, they will be able to start  
15      up and we'll be able to start up and restore what has been a  
16      reputation that has been a good one all along and has been  
17      tarnished in the last year or so.

18             Ralph may have some thoughts which -- if that's  
19      okay.

20             CHAIRMAN ZECH: Certainly. Go ahead.

21             MR. SYLVIA: I don't have anything planned, but I  
22      would like to say I do have a high degree of confidence that  
23      we are ready to start up when we finish this current outage,  
24      and that we will operate safely and within the regulations of  
25      our license.



1           I think that the company has done an excellent job  
2   in addressing the root cause problems identified by the  
3   Independent Overview Committee. They have put in an entirely  
4   new management system with well-defined goals and regiment  
5   parameters and that addresses the accountability issue quite  
6   well, which I think was one of the major problems.

7           We have made numerous organizational changes and we  
8   have hired additional people with commercial operating  
9   experience, and I think these are the responses to the root  
10   cause problem.

11          In addition, we have done specific things that  
12   directly address the inexperience concern. I think our  
13   training program, our simulator training program, covers  
14   everything that was mentioned here today that you gentlemen  
15   thought should be covered. It's not just a program that  
16   addresses the rod pull error and what went on in the control  
17   room at that point in time; it addresses the overall plant  
18   operations with the team concept.

19          We had a human factors expert investigate that  
20   incident to determine what could be learned from a human point  
21   of view. And this is where the team idea came from, with the  
22   shift operations advisor and the shift technical advisor and  
23   reactor engineer all participating in the simulator training  
24   just as if they were working together in the control room.

25          Also, we identified a need to do some supervisory



1 and management training so that the supervision would  
2 understand how to better utilize the people working for them  
3 on shift.

4 We have also done operator training outside of the  
5 control room. We have had quite an improvement in the  
6 non-licensed operator training program and how they perform  
7 their duties and associated log sheets that they use and the  
8 standards for training them on how to do their rounds. And we  
9 have posted information on equipment that's a little more  
10 difficult to inspect, to give them directions locally on how  
11 to do that. We have labeled equipment.

12 We have made many improvements that would help  
13 offset the inexperience factor. We have given additional  
14 instructions to the shift operations advisors who are people  
15 with experience from the industry and licensed on our plant  
16 there to advise us.

17 So I don't agree with something that was said a  
18 little earlier about we didn't pay attention. The shift  
19 operations advisor wasn't watching the rod pull, he wasn't  
20 anymore involved than the shift supervisor was, so I don't  
21 agree with that characterization. I think we didn't have a  
22 plan, a management plan, to get the advice from him properly.  
23 We didn't tell him when to advise us and how to advise us.

24 CHAIRMAN ZECH: And now you have the plan and now  
25 you're going to execute it.

1           MR. SYLVIA: Yes, sir. And these are some of the  
2 specific things we have done to address the inexperience  
3 factor. And that, along with addressing the root cause  
4 management concerns, gives me the assurance I have that we can  
5 start up and operate in accordance with our license in a safe  
6 manner.

7           CHAIRMAN ZECH: Thank you. Questions?

8           COMMISSIONER ASSELSTINE: Two brief ones. One I'd  
9 like to go back to briefly, Mr. McCarthy, one you addressed,  
10 sort of a soul-searching question a little bit. I appreciate  
11 the comment about the transition from construction to  
12 operation, and I accept that as part of the difficulty. But  
13 it also seemed to me certainly when I was out at the plant at  
14 the time we issued the full power license about a year ago,  
15 that there were an awful lot of indicators that focused on the  
16 operations side. We have talked about a few of them earlier  
17 today.

18           But the training program -- you really had done a  
19 lot on training your operators. You had an outstanding  
20 pass/fail rate for your operating staff, you had a good  
21 Fitness for Duty program. And one of the things that I guess  
22 impressed me at the time was the extensive management  
23 involvement. You had two corporate managers at the site. You  
24 went with me on the tour; it was obvious you were familiar  
25 with the plant. You were making notes to yourself as we went

1 on the tour, so it was clear that you had been fairly heavily  
2 involved in the project.

3 And yet, things went wrong apart from the transition  
4 from construction to operation. You have obviously thought  
5 about this a lot over the past six months or probably longer,  
6 going back a year. What else do you think went wrong? What  
7 contributed to the direction that things took over the past  
8 year?

9 MR. MC CARTHY: I think probably the single weakest  
10 point is the point that all of you, or many of you, have made  
11 this afternoon, that the individual in charge of that  
12 transition was much more construction oriented than operation  
13 oriented. And that that is where the two cultures didn't  
14 meet, exactly. That's the only thing I can say.

15 COMMISSIONER ASSELSTINE: Well, you had an advisor  
16 at the plant who was a plant superintendent at another plant.

17 MR. MC CARTHY: Of course. All kinds of advisors.  
18 And as you said, we had a 40 out of 41 pass rate. The  
19 individuals went off to other plants and trained and did fine  
20 and all that sort of thing. It's one of those things. It's a  
21 very hard human equation to try and balance. And I think now  
22 we have come a long way. We have seen something wrong and we  
23 have fixed it.

24 The hard thing is to see what's wrong, and I think  
25 Jack Calhoun, when you asked him the question that you did,

1 Commissioner Bernthal, -- once you know something is wrong,  
2 you can fix it sometimes. But unless it has been shown to be  
3 wrong it's often very hard to say it won't work. And that's  
4 true in lots of other fields of human endeavor, too.

5 COMMISSIONER ASSELSTINE: The second question I have  
6 has to do with I guess what I would characterize as the  
7 attitude problem, and it's been talked about briefly by  
8 others today.

9 Your Overview Committee said, "reluctance to face  
10 facts, identify problems, establish their sources and root  
11 causes, and then work towards timely and effective  
12 solutions." I think Jack Calhoun mentioned insensitivity to  
13 our requirements and concerns. Our recent enforcement action  
14 talked about the lack of forthrightness and candor with the  
15 NRC. Quite frankly, I would have gone a step beyond that.  
16 And I think Jack Calhoun said earlier, the lack of a cautious  
17 approach; if in doubt, stop and sort things out.

18 I'd be interested in your perception of the problem,  
19 if it is a problem; and if so, why it occurred. And second,  
20 what you've done about it to make sure that if the plant  
21 starts up again, that part of the problem, the attitude  
22 problem, really is gone once and for all.

23 MR. MC CARTHY: Well in the first place, in my role  
24 a year and a half or a year ago, I didn't spend three mornings  
25 a week at the plant as I have been for the last six months,

1 and I guess I'd have to say that many of the characterizations  
2 that you just made I would have doubted back then.

3 I think the things that have happened in the last  
4 six months and the pointing out of concerns by the Independent  
5 Overview Committee have had a tremendous reaction on the  
6 people down there. I think the joining of our forces by Ralph  
7 Sylvia with his background has had an equally strong impact on  
8 people.

9 We had, I guess it was in January, a series of  
10 meetings put on by a consultant, essentially a seminar on what  
11 the NRC is all about and what the Licensees are all about, and  
12 how do you mesh the personal and human viewpoints of both of  
13 those grouped organizations so that you can have an effective  
14 communication between them. And I think you would be  
15 absolutely amazed at the viewpoints of some of the individuals  
16 on the staff, on our staff not your staff, as to what the role  
17 of the NRC was. I don't think they really knew. And that may  
18 be true in other places, too. You know, it's hard. I can be  
19 very specific about us but I can't be very specific about lots  
20 of other people.

21 We tried to impress the need for candor. My  
22 absolute belief is that that's the only way to get along with  
23 people, no matter what the corporate relationships are; to be  
24 candid and try to always develop from them what they know and  
25 tell them what you know. And I think that course has had a

1 big effect.

2 We, I think -- and I think if you ask the Region III  
3 people I think they would respond the same way -- that our  
4 relationship has been a great deal different in the past eight  
5 or nine months than it was before.

6 That's not to say that during construction our  
7 relationship wasn't very good because if you'll remember we  
8 never had a fine during the nine or ten years of construction  
9 of Fermi. And that's because we decided that we were going to  
10 do it right. And I think they did do it right.

11 So I don't know if that answers your question. It's  
12 a very hard question.

13 COMMISSIONER ASSELSTINE: Yes, I realize it's not an  
14 easy one. Thank you.

15 CHAIRMAN ZECH: Fred?

16 [No response.]

17 CHAIRMAN ZECH: It's always easier in hindsight to  
18 look back and perhaps believe that you would take different  
19 courses of action. But I think it's important, in your  
20 particular case, that you recognize that a lot of these things  
21 that we are talking about now, we did talk about before your  
22 incident. And although most of us who visited your facility  
23 were very impressed with the construction and the plant  
24 itself, and the management team, the operators -- I think  
25 there still was a very important element to consider. And



1     that was shifting from construction to operation.

2             And I think when I was out there we talked about  
3     that very point. And also, attention to detail and discipline  
4     and the management involvement and all those things. Those  
5     are more than words, I think. And it seems to me that perhaps  
6     the organization has learned that the hard way. It's hard to  
7     describe, I think, what you even mean by management  
8     involvement, perhaps, sometimes.

9             But it really is the key when you're transitioning  
10    from construction to operation. And so perhaps others can  
11    learn from your difficulty and I think if you could look back  
12    and make such a contribution because it was difficult, you had  
13    done a good job. And everyone had every right to believe that  
14    things were working together. The only thing was you hadn't  
15    transitioned yet to the operational phase.

16            And other than that, there was nothing to -- and  
17    management involvement, of course, is a big key in that. And  
18    you didn't have the experience. So those are things -- and I  
19    think your Independent Oversight Committee has done an  
20    excellent job, as far as I can tell, in looking into the  
21    things. And I think you have been very candid and honest with  
22    them, and I think they have, too. But let's learn from this  
23    experience. That's the important thing.

24            This is a very important way to learn because it's  
25    so difficult, looking into that crystal ball, when you've done



1     such a good job in construction. So maybe the biggest  
2     contribution you can make is to analyze this very carefully  
3     and see -- look at yourself and say what could we have done  
4     and how could we have recognized some of the teamwork that was  
5     missing and the attitudes.

6             Those are very subjective, very difficult, for  
7     anybody to judge. But you were there, you were in the midst  
8     of it all, and your people. And perhaps you can make a  
9     contribution that might be more useful to us at the NRC, as  
10    well as to the other utilities.

11            So I think that's a commendable effort and I hope  
12    that you will be able to put a fair amount of attention into  
13    that.

14            MR. MC CARTHY: I will.

15            CHAIRMAN ZECH: Thank you very much.

16            Michael Keegan, the Safe Energy Coalition of  
17    Michigan. And there's Monroe City County. Do you want to  
18    come together, or separately? Is Monroe City County here?

19            Separately? Okay, fine. This is Mr. Michael  
20    Keegan, Safe Energy Coalition of Michigan. Proceed, please.

21            MR. KEEGAN: Gentleman, thank you for allowing me to  
22    present this afternoon. My name is Michael J. Keegan. I am  
23    the Acting Director of the Safe Energy Coalition of Michigan.

24            I am currently a Doctoral Fellow in the Department  
25    of Sociology at Bowling Green State University, specializing

1 in environmental sociology.

2 I'm here today representing a constituency of over  
3 1,000 concerned citizens of Southeastern Michigan. We are  
4 here to demand that licensing hearings for Detroit Edison's  
5 Fermi-2 Nuclear Reactor be reopened. Since the original  
6 hearings ended in March 1982, several new construction and  
7 safety concerns have been uncovered.

8 On February 18, 1986, our organization filed a 10  
9 CFR 2.202 and 2.206 petition with the NRC's Office of Nuclear  
10 Reactor Regulation, the Office of Inspection and Enforcement,  
11 and Region III. The NRC has not yet responded to our  
12 petition. The NRC must address our allegations and request  
13 for revocation of Detroit Edison's operating license before a  
14 decision is reached as to restart of Fermi-2.

15 Additional inadequacies have arisen since we filed  
16 the petition. One, Detroit Edison's non-disclosure of the  
17 lack of documentation for 20 engineering systems. Two,  
18 inadequate capacity of emergency equipment cooling water  
19 system, to cool both safety and non-safety systems. Three,  
20 degraded grid voltage, which will result in the failure of  
21 electrical equipment and engines when there is a brown-out.  
22 Four, cracks, scratches, indications, corrosions, pitting,  
23 scuffing, minor imperfections on the reactor dome and on the  
24 flanges of the reactor vessel.

25 Five, Office of Investigation investigation of Safe

1 Team. Six, a 1973 fire in which several trailers of  
2 documentation were destroyed, perhaps purposefully. Seven,  
3 the dropping of the reactor dome onto the reactor vessel when  
4 one of four straps snapped. This occurrence made a loud noise  
5 which reverberated throughout the building. And eight, 15  
6 items which remain open under the multi-plant action document.

7 In a recent statement to the press, Region III  
8 administrator James Keppler stated that had he known all the  
9 loose ends at Fermi-2 15 months ago, he would not have  
10 recommended the issuance of an operating license.  
11 Unfortunately, there are as many unresolved issues today as  
12 there were in March of 1985.

13 In addition, Harold Denton, Director of NRC's Office  
14 of Nuclear Reactor Regulation, told utility officials in June,  
15 "I don't have the same warm feeling about GE containment that  
16 I do about the larger, dry containments." There has been a  
17 lot of work done on those containments, but Mark I  
18 containments -- especially being smaller with lower design  
19 pressure and in spite of suppression pool. If you look at  
20 the WASH-1400 Reg Safety Study, you'll find that something  
21 like 90 percent probability of that containment failing.

22 Fermi-2 is the highest powered reactor with a Mark I  
23 containment in the nation. SECOM has filed six FOIAs since  
24 March 1986, all of which have gone unanswered. All of these  
25 are beyond the legally mandated ten day response limit. It

1 appears to us that this has been done purposefully. The  
2 consequences of these inactions has been to hamper us in the  
3 receipt of vital information.

4 Today we have filed an FOIA requesting all  
5 documentation between the NRC and Detroit Edison -- including  
6 General Electric and all suppliers and consultants --  
7 concerning the cracks, scratches, pitting, corrosion, and  
8 anomalies on the reactor dome and the flange of the reactor  
9 vessel.

10 We fully expect to have that documentation within  
11 ten days. If the alleged cracks in the Fermi-2 dome do, in  
12 fact, exist, as reported to SECOM, the operation and startup  
13 of the reactor could result in another Chernobyl type  
14 accident.

15 The NRC analysis of restart has fundamental  
16 methodological flaws. The NRC will be utilizing information  
17 generated by the Institute of Nuclear Power Operations and  
18 Detroit Edison's Independent Overview Committee to help make  
19 decisions on restart. This information is exempt from public  
20 disclosure. The ties of these bodies to Detroit Edison  
21 Company negate independence.

22 In a related matter, the NRC has relied on Edison's  
23 Safe Team analysis of nuclear safety, management, industrial  
24 matters, and miscellaneous. It appears to us that the intent  
25 of Safe Team is to circumvent information from being addressed

1 by the NRC. Of the 747 nuclear safety concerns presented by  
2 the workers to Safe Team, 90 percent have gone unreviewed by  
3 the NRC.

4 There are 368 management concerns, 178 industrial  
5 matters, and 180 miscellaneous concerns which are reviewed in  
6 similar fashion by the NRC. We regard acceptance by the NRC  
7 of conclusions based upon this methodology to be fatally  
8 flawed and totally unacceptable.

9 Recently, this Commission issued a \$300,000 fine to  
10 Detroit Edison for a July 2, 1985 premature criticality. We  
11 consider this fine to be merely tokenism. It serves to  
12 reinforce negligent operation and mismanagement of Fermi-2.  
13 We consider an unrecognized chain reaction to be a severe  
14 danger to the public.

15 Because of accumulation of Fermi-2 specific related  
16 issues and the unresolved General Electric containment  
17 inadequacies, we will ask Congressman John Dingell to hold  
18 congressional hearings on the General Electric boiling water  
19 reactors.

20 In a statement to the New York Times, NRC officials  
21 said "Proceedings on any reactor can be reopened if sufficient  
22 new information warrants it." In light of what has been  
23 presented to the NRC in our February 1986 petition and that  
24 which has been presented today, SECOM demands that the Atomic  
25 Safety and Licensing Board reconvene and hold adjudicatory

1       hearings on Fermi-2 license.

2               The NRC has the right, under the Atomic Energy Act,  
3       to revoke a license under certain circumstances, willful or  
4       careless disregard for requirements, failure to construct and  
5       operate a facility in accordance with the license or technical  
6       specifications, or failure to observe NRC regulations.

7               These conditions do, in fact, exist with Detroit  
8       Edison Company's Fermi-2. This plant represents 16 years of  
9       failure and has placed the utility on the brink of  
10      bankruptcy. Detroit Edison cannot afford the safe operation  
11      of this plant. Allowing Edison to operate this plant could  
12      result in a cataclysmic accident.

13              The license must be revoked to protect the health  
14      and well being of the residents of Michigan, Ohio, and  
15      Ontario. Fermi-2 has the worst start up record of any nuclear  
16      power plant ever. It has been rated as one of the nation's  
17      worst. To allow this plant to continue with a track record of  
18      16 years of failure is unconscionable.

19              CHAIRMAN ZECH: Thank you. Questions?

20              COMMISSIONER ASSELSTINE: I have one question for  
21      the Staff, if I could. When does the Staff intend to respond  
22      to the 2.206 petition and will it be before restart?

23              MR. TAYLOR: Yes, we're working on it now and expect  
24      a response any time.

25              COMMISSIONER ASSELSTINE: Do you have a specific



1 time period? Well, it'll be this month then?

2 MR. TAYLOR: Yes.

3 CHAIRMAN ZECH: Jim, did you have another question?

4 COMMISSIONER ASSELSTINE: No, I think that's it.

5 Yes.

6 MR. BERNTHAL: Well, you know there's a lot of heat  
7 in this statement, but I'd like to get some sense of how much  
8 light there is. I should think the Staff would want to  
9 respond to some of these allegations.

10 For example, do you want to tell us about what the  
11 consequence was of this alleged dropping of the reactor dome  
12 and the sound that reverberated throughout the building?  
13 Anybody want to speak to that?

14 MR. KEPPLER: I don't have any information on this,  
15 at all.

16 MR. BERNTHAL: Does anybody have any information?  
17 Was that a real event or not?

18 MR. KEEGAN: Yes.

19 MR. BERNTHAL: Well, presumably, the utility should  
20 know if it was.

21 CHAIRMAN ZECH: Does anybody want to attempt to make  
22 a response to that?

23 MR. MC CARTHY: When was this supposed to be?

24 MR. KEEGAN: Late '78 or '79.

25 CHAIRMAN ZECH: Late '78 and '79?



1 MR. KEEGAN: Yes.

2 MR. BERNTHAL: This is eight years ago?

3 MR. KEEGAN: This was reported by a whistle blower  
4 to us.

5 CHAIRMAN ZECH: Well, has it been officially  
6 reported before to the NRC or is this the first time, today?

7 MR. KEEGAN: To my knowledge -- I don't know what  
8 has come of it. This is the first I have brought it up.

9 CHAIRMAN ZECH: Thank you. Mr. Keppler?

10 MR. KEPPLER: This has not been reported before and  
11 I would suggest that perhaps this gentleman could provide us  
12 information in regard to that whistle blower.

13 MR. KEEGAN: I will be in contact with GAP to see  
14 how to go about this.

15 CHAIRMAN ZECH: Fine.

16 MR. BERNTHAL: I notice that there are one or two  
17 other allegations that you make here, that seem to refer to  
18 your source. I think you probably ought to, in some way  
19 that's appropriate for that source -- if that individual or  
20 individuals wish to maintain anonymity, they certainly have  
21 the right to do that. But you ought to probably make that  
22 information available to the NRC.

23 I would make the comment that, when you commented on  
24 the 90 percent probability of containment failing, I'm sure  
25 you understand that that's in the event of a severe core melt

1 accident. That's not sort of failing in routine operations  
2 and that is not in your statement. That does refer to a  
3 severe core melt incident, as I'm sure you are aware.

4 MR. KEEGAN: Yes, that's Mr. Denton's statement.

5 MR. BERNTHAL: That's right, in relation to a core  
6 melt accident.

7 What's the story on all of these FOIAs that are  
8 supposedly beyond the ten day response limit? Does someone  
9 want to comment on that?

10 MR. PARLER: I don't have any information about  
11 that, Commissioner. I'll be glad to look into it. I'm just  
12 not familiar with anything that's pending on appeal. Perhaps  
13 the matters are still being reviewed by the Staff, but I don't  
14 know.

15 MR. LYNCH: In the normal course of events, we  
16 process those very quickly. Again, as your general counsel  
17 has pointed out, as it works its way through the system, much  
18 of the documentation we provide is reviewed very carefully to  
19 determine whether it's pre-decisional or not. Some of the  
20 information is sensitive and I think it takes some time to  
21 review whether that information is releasable.

22 Normally, though, we provide it very, very quickly,  
23 within a very short period of time. But as you recognize,  
24 some of these documents have been very, very sensitive.

25 MR. BERNTHAL: I'm not sure that's an answer to the

1 question of whether we are within the legally mandated  
2 response time, here.

3 COMMISSIONER ASSELSTINE: I think the answer is we  
4 are rarely within the ten day limit on Freedom of Information  
5 Act requests, for a variety of reasons.

6 MR. BERNTHAL: I guess that means that you don't  
7 need to feel alone in not getting your response in ten days,  
8 if that's any consolation.

9 MR. KEEGAN: Some of these are over 100 days old,  
10 stemming from March. And how can we take part in this  
11 political process if we are kept in the dark. And here we are  
12 talking about a restart decision. We're talking about the  
13 disposition of the 2.202 and 2.206 will be established before  
14 restart. That's assuming there's going to be a restart.

15 So it sounds as though a determination has already  
16 been made on that.

17 MR. BERNTHAL: Well, if there isn't going to be a  
18 restart, I guess there is not much need to evaluate them.

19 Let me ask about the 747 nuclear safety concerns  
20 presented by the workers of Safe Team, 90 percent of which  
21 have gone unreviewed by the NRC. Does somebody want to clue  
22 me in on what happened to those 90 percent? Mr. Keppler?

23 MR. KEPPLER: When we came before the Commission for  
24 a full power licensing, we talked about the Fermi Safe Team at  
25 great length. The Fermi Safe Team had a number of

1 shortcomings to it and you will recall, in fact, that the  
2 staff took no credits for that effort, in recommending its  
3 issuance of the license.

4 The Safe Team concept has been an evolving concept.  
5 The Fermi Safe Team was not one that we would hold up to use  
6 as a model for other programs, but we did look at all of the  
7 issues that were identified that had any potential safety  
8 significance at all and were satisfied that they were  
9 resolved.

10 MR. BERNTHAL: So what you're saying is that you  
11 have gone through those files and reviewed those documents and  
12 you have considered any of those issues that you felt had  
13 safety significance?

14 MR. KEPPLER: The ones that were developed to the  
15 extent that they could be reviewed. The process itself was  
16 not a very good process and I tried to explain to the  
17 Commission that, in recommending issuance of the license, we  
18 really took no credit for that program.

19 MR. BERNTHAL: Okay.

20 MR. KEPPLER: If I could, I would just say it's hard  
21 to react to issues that are dumped on us with this time  
22 frame. But I think there are some of these we know the answer  
23 to. There are some that we don't know. And to those that we  
24 don't have information, we will have to pursue it.

25 CHAIRMAN ZECH: Fine, okay.

1 Yes, Mr. McCarthy?

2 MR. MC CARTHY: I would just like to comment on  
3 Safe Team. Our Safe Team was the first Safe Team. It is used  
4 now as a generic name. I believe we had the first Safe Team.  
5 And the purpose of Safe Team was to allow individuals who  
6 worked at the plant, who were associated with the plant in  
7 some way -- including construction people who were there for a  
8 short time -- to tell us, in complete anonymity, what they  
9 thought was going on at the plant and if they had any  
10 questions, they would be exposed, they would be involved, they  
11 would be written down, they would be investigated, and they  
12 would be completely available to the Nuclear Regulatory  
13 Commission.

14 The purpose of it was to prevent a person coming in  
15 eight years later and alleging that the reactor dome, as he  
16 calls it, fell with a loud clang. The purpose was to find out  
17 about things so that things could be done about them, so that  
18 we could proceed in an orderly and safe way.

19 That was the purpose of Safe Team and I think it  
20 succeeded better than has been mentioned here today.

21 CHAIRMAN ZECH: Thank you very much, Mr. McCarthy.  
22 I appreciate it.

23 MR. KEEGAN: May I respond to that?

24 CHAIRMAN ZECH: Yes, you may.

25 MR. KEEGAN: As you know, we have hired the

1 Government Accountability Project to take whistle blower  
2 allegations. We have a number of people who reported to the  
3 Safe Team who were fired and who are currently involved in  
4 legal suit against Detroit Edison. And I believe that a couple  
5 of them have won. I believe I have a lawyer here from GAP who  
6 may be able to speak to that better.

7 CHAIRMAN ZECH: That's fine. I think that you have  
8 told us what you wanted to tell us.

9 I would only say that I would like the Staff to look  
10 at the allegations that have been made responsibly. And if  
11 there's anything that we should look at, I would hope that  
12 you'd do so. I expect you to do so.

13 I just wanted to say, though, this is a serious  
14 business we are all about, Mr. Keegan and we really do have a  
15 great responsibility to the American people, to our country.  
16 We want to do what's right. It doesn't help us too much to  
17 have things brought to us at the last minute, that hasn't been  
18 officially brought to the Staff or to the Commission, that  
19 sound very serious.

20 We will look into what you've told us here, but if  
21 you are really serious about getting something done, it would  
22 be most helpful if it happened in 1978 or '79, to have brought  
23 it to us long before 1986.

24 Mr. Bernthal?

25 MR. BERNTHAL: Yes, I was just going to ask -- as I

1 gather Jim, Mr. Keppler you scanned through some of this.  
2 You've indicated that you're not aware of this reactor dome  
3 incident. Are there any others that, in your judgment, you'd  
4 point to as matters that you're going to have to take a look  
5 at quickly and check out?

6 MR. KEPPLER: I don't know what Item 8 is.

7 COMMISSIONER BERNTHAL: I was wondering about that  
8 myself. Does anybody know about the 15 items under  
9 multi-plant action document? It's a long number, I won't read  
10 the number. What does that mean? Anybody know?

11 MR. KEPPLER: I don't know what Number 6 is.

12 CHAIRMAN ZECH: Maybe the Project Manager can help  
13 us out.

14 MR. LYNCH: Recently, the staff sent out a letter to  
15 all utilities requesting them to respond on the record for us  
16 to implement our GIM system, Generic Items Methodology I think  
17 it is. Basically we probably knew the answer, but what we  
18 wanted to do was have the utilities respond as to where they  
19 stand with respect to many of the multiple plant actions.

20 Now, many of them are anticipated not to be resolved  
21 until 1988, '88 or '90. That is not news to the Commission or  
22 the staff. Some of them basically are awaiting generic  
23 resolution of problems that have been a long time coming.

24 Basically, I think what Mr. Keegan is referring to  
25 is that since some of the generic items have not been closed



1 or will not be resolved, for example, for NUREG-0737 Rev. 1  
2 until sometime in the future, I think he's referring to those  
3 items. I have not discussed this with him but that's the way  
4 I interpret it.

5 COMMISSIONER BERNTHAL: So what you're saying is  
6 that those items are not unique to this plant.

7 MR. LYNCH: They're not unique to Fermi. They are  
8 standard throughout the industry, and basically it's the  
9 implementation of 0737 and Rev. 1 to 0737.

10 COMMISSIONER BERNTHAL: This 1973 fire is 13 years  
11 ago. How long have you known about that one?

12 MR. KEEGAN: That is common knowledge in Monroe.

13 COMMISSIONER BERNTHAL: Mr. Keppler, I thought you  
14 said you didn't know about that.

15 MR. KEPPLER: I'm not aware of that issue.

16 COMMISSIONER BERNTHAL: It's common knowledge in  
17 Monroe.

18 CHAIRMAN ZECH: Any other questions?

19 COMMISSIONER ASSELSTINE: One quick comment. First  
20 on the FOIA requests, I would agree that three months is  
21 getting pretty long. We don't usually make the 10-day  
22 requirement, quite frankly, but we can do a lot better than  
23 100 days. I think your point is well taken on the FOIA's.  
24 It's not always easy to respond to those things, particularly  
25 if there's a lot of pre-decisional information that has to be

1 reviewed, but I think that's a fair comment.

2 Second, with my question on the 2.206 Petition, I  
3 didn't mean to imply that the decision had been made on  
4 restart. My question was a bit too short-handed, and what I  
5 was really trying to ask was whether the staff intended to  
6 respond to the 2.206 petition before the staff believed that  
7 it would be in a position to make a decision on restart. And  
8 you are quite correct to point that out, and that would have  
9 been a much better way to phrase the question.

10 And the third item I think I would mention is the  
11 Mark I containment question. I think that that is a serious  
12 question. It's one that we have talked about among ourselves  
13 a bit and it's something that I think we do have to look at in  
14 greater detail. I think it's a concern not just for this  
15 plant; it's a generic issue for all of the Mark I  
16 containments. And I think notwithstanding Fred's comment  
17 earlier, it's one that we should pay attention to.

18 CHAIRMAN ZECH: Anything else?

19 [No response.]

20 All right, thank you very much.

21 MR. KEEGAN: Thank you very much.

22 CHAIRMAN ZECH: Monroe City-County, Richard  
23 Petticrew and Jon Eckert. Please proceed, gentlemen.

24 MR. PETTICREW: Mr. Chairman and members of the  
25 Commission, I'd like to take this opportunity on behalf of the

1 Monroe County Board of Commissioners to thank you for allowing  
2 us on the agenda. I'd also like to extend my appreciation to  
3 Mr. Keppler and Mr. Greenman for the information and keeping  
4 the County Board informed of the status of Fermi-2.

5 My next comment is with regard to the meeting we  
6 attended here on March 12th when Sister Bocce referred to the  
7 letter from Governor Blanchard, the Governor of the state of  
8 Michigan, on the unmet needs in regard to ambulances in case  
9 of an accident at Fermi-2, which the Governor's letter is  
10 still in effect. And we forwarded you in the last week or so  
11 a list of the availability of the ambulances. And of course  
12 in that meeting we didn't have a chance to -- but we were not  
13 on the agenda, and we forwarded the letters to you immediately  
14 after that.

15 Also then there was some discussion on the common  
16 care centers which I would like to have Mr. Eckert, our  
17 Director of Civil Defense, elaborate on.

18 CHAIRMAN ZECH: Thank you.

19 MR. ECKERT: I believe at the March 12th meeting,  
20 Commissioner Zech, you indicated to Sister Bocce that that had  
21 been litigated, as far as the special care facilities and the  
22 transportation issue. She brought that up at that meeting.

23 It was indicated that the County had made no attempt  
24 to take any steps forward in regard to those issues, and I  
25 forwarded you on June 11th --

1           CHAIRMAN ZECH: I don't recall making such a  
2 statement, but perhaps I did.

3           MR. ECKERT: I think you did.

4           CHAIRMAN ZECH: All I do remember is that I did  
5 remember to say something to the effect that I had hoped that  
6 the utility could work with the good sisters to resolve their  
7 problem. I remember that very well. Go ahead.

8           MR. ECKERT: As indicated in our letter to you,  
9 there was a task force which was assigned that particular  
10 project and has been working diligently on it over the past  
11 year. We awaited for a long period of time a report from the  
12 Michigan Department of Public Health on the number of vehicles  
13 for transportation. We have that report, we have forwarded it  
14 to you. We do have an adequate number of ambulances available  
15 to Monroe County for movement of homebound individuals and  
16 special care needs.

17           So we wanted to, once and for all, lay that to rest,  
18 that the County is moving forward on this as we are the  
19 planning process, very diligently. That's all I had.

20           CHAIRMAN ZECH: Have you satisfied the sisters'  
21 concerns?

22           MR. ECKERT: Sister Paula Maria sits on that task  
23 force and on the special care facilities, and she was in  
24 agreement that this plan should be sent out to the rest homes  
25 and so forth for their approval.

1           CHAIRMAN ZECH: Fine. Thank you very much. Is  
2 there anything else, gentlemen?

3           MR. ECKERT: I believe there was also mentioned at  
4 the last meeting if I recall something about adequate siren  
5 coverage. During that period from March until now, Detroit  
6 Edison agreed to install an additional 21 sirens in Monroe  
7 County, bringing the total to 51. And I addressed the County  
8 Board with this, and as I did them I will tell you that I feel  
9 that number is adequate. I'm not a siren expert, but I do  
10 believe that number will be adequate for warning the general  
11 public. And up until this time I don't believe it was.

12           So I think the County -- or at least I'm satisfied  
13 at the present time with that type of warning system.

14           CHAIRMAN ZECH: All right, thank you very much.  
15 Before you leave, any questions?

16           COMMISSIONER ASSELSTINE: Just one quick followup on  
17 the transportation arrangements. I take it from what you are  
18 saying that that still isn't completely closed out yet? What  
19 you have done is you have developed your plan including the  
20 identification of vehicles that would be available; you are  
21 sending that out now for comment to the local folks, including  
22 the sisters?

23           MR. ECKERT: What we did is ask the -- we had  
24 approximately the need for 170 ambulances. By getting the  
25 total number of ambulances from the Michigan Department of

1 Health, which are licensed not only in Michigan but in Ohio,  
2 and that's the surrounding counties, it gives us a total of  
3 470 ambulances available in that area, in the tri-county  
4 area. So that's more than adequate to move our homebound and  
5 our rest home people that need ambulance transportation.

6 COMMISSIONER ASSELSTINE: Good. It would be good,  
7 the next time we hear from Sister Bocce, to hear that this  
8 problem has now, once and for all, been resolved rather than  
9 her coming back time and again saying it still isn't fixed.

10 CHAIRMAN ZECH: I would agree with that.

11 MR. ECKERT: As we move forward with this we'll be  
12 happy to send you people the signed plans and so forth that  
13 will be signed by all the individuals.

14 CHAIRMAN ZECH: Thank you very much.

15 COMMISSIONER BERNTHAL: Are we to understand then  
16 that the concerns of the sisters there are resolved now? I  
17 mean, I realize you don't want to speak for them, but --

18 MR. ECKERT: I can't speak for them.

19 COMMISSIONER ASSELSTINE: They're a step short of  
20 that.

21 MR. ECKERT: We have worked very hard with them  
22 diligently, and hopefully -- at least I feel that with their  
23 participation in the planning process and now knowing what has  
24 been the big question for a number of years, how many  
25 ambulances are available, I feel that question should be

1 resolved.

2 COMMISSIONER BERNTHAL: Okay. But what's the step  
3 short then that you're referring to?

4 COMMISSIONER ASSELSTINE: I gather what they've done  
5 is identified the number of ambulances available and the plan  
6 for how they would be used; they've sent that out now to  
7 everybody to ask if that's satisfactory. So the one step  
8 short is they haven't heard back yet from them, I think,  
9 saying we're satisfied now.

10 MR. ECKERT: I would hope they'd be satisfied.

11 COMMISSIONER ASSELSTINE: We hope they're satisfied  
12 with you; we hope that you've solved the problem.

13 CHAIRMAN ZECH: Anything else? All right, thank you  
14 very much.

15 The Commission has been briefed today by the NRC  
16 Staff and by others on the status of Detroit Edison's efforts  
17 to comply with the NRC requirements preparatory to an NRC  
18 decision to lift the confirmatory action letter and permit  
19 operation above five percent power.

20 At this time I'd like to pose the question that I  
21 posed earlier in the meeting to my fellow commissioners:  
22 Based on the Commission's imposed on the recent enforcement  
23 action, the staff's planned involvement in oversight and the  
24 Licensee's performance improvement program, do you endorse a  
25 decision by the staff to allow the restart of Fermi-2 when the



1 staff determines that they are satisfied that the Licensee and  
2 the plant are ready for restart?

3 All those in favor say Aye please.

4 COMMISSIONER BERNTHAL: Let me make a comment before  
5 we vote on that, if I may.

6 CHAIRMAN ZECH: Certainly.

7 COMMISSIONER BERNTHAL: The one thing that I would  
8 like the staff to do, obviously, based on the discussion here  
9 today -- and I think the public deserves to have this, and I  
10 would suggest it be made public -- is to provide me and the  
11 Commission with a point-by-point response to these issues that  
12 have been raised by the Safe Energy Coalition here so we  
13 understand and the public understands exactly how those have  
14 been dealt with.

15 Beyond that, I'm prepared to --

16 CHAIRMAN ZECH: I agree. I certainly assumed I had  
17 that kind of a commitment from the staff ahead of time to look  
18 into those allegations, all of them, and satisfy yourselves  
19 and ourselves that they can be resolved if there is problems  
20 there, prior to restart. Is that a commitment I have from the  
21 staff to do that?

22 MR. STELLO: I don't want to use the word resolved  
23 because if we have to have a discussion with the --

24 CHAIRMAN ZECH: Well you pick another word then. I  
25 just want it --

1 MR. STELLO: We will make every effort to give you  
2 the status on where we stand. If it involves pursuing  
3 allegations, it's taken us many more than months to even have  
4 a --

5 CHAIRMAN ZECH: Certainly. We don't want any safety  
6 items that we're concerned about.

7 MR. STELLO: We won't have any of those. Those will  
8 all be resolved.

9 CHAIRMAN ZECH: That's what I mean as far as  
10 resolved is concerned. Any other allegations to be looked  
11 into as appropriate.

12 Anything else?

13 [No response.]

14 Then I won't repeat the question, but do you endorse  
15 the decision by the staff, when they are ready to make the  
16 decision, for restart? All those in favor say aye.

17 CHAIRMAN ZECH: Aye.

18 COMMISSIONER BERNTHAL: Aye.

19 COMMISSIONER ROBERTS: Aye.

20 CHAIRMAN ZECH: All those opposed?

21 COMMISSIONER ASSELSTINE: I'm going to say no at the  
22 moment because I want to reserve judgment a bit on this case.  
23 And quite frankly, I'd like to see the 2.206 petition from the  
24 staff before I make a judgment on whether I'm comfortable with  
25 the staff's position on this case.

1 CHAIRMAN ZECH: All right. Do you want to reserve  
2 decision completely or do you want to vote against it for now?

3 COMMISSIONER ASSELSTINE: I'd say I'd vote against  
4 right now giving the staff the absolute authority to go ahead.

5 CHAIRMAN ZECH: So the vote is three to one.

6 COMMISSIONER ASSELSTINE: Right.

7 CHAIRMAN ZECH: All right, fine. The meeting is  
8 adjourned.

9 [Whereupon, at 4:30 p.m., the Commission meeting was  
10 adjourned.]

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1  
2 REPORTER'S CERTIFICATE  
3

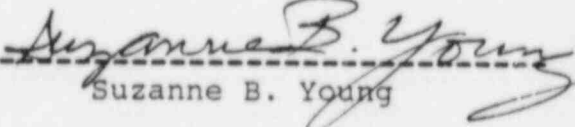
4 This is to certify that the attached events of a  
5 meeting of the U.S. Nuclear Regulatory Commission entitled:  
6

7 TITLE OF MEETING: Discussion/Possible Vote on Fermi Restart (Public  
Meeting)

8 PLACE OF MEETING: Washington, D.C.

9 DATE OF MEETING: Monday, July 7, 1986  
10

11 were held as herein appears, and that this is the original  
12 transcript thereof for the file of the Commission taken  
13 stenographically by me, thereafter reduced to typewriting by  
14 me or under the direction of the court reporting company, and  
15 that the transcript is a true and accurate record of the  
16 foregoing events.  
17

18   
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Suzanne B. Young  
19  
20  
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22 Ann Riley & Associates, Ltd.  
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JULY 3, 1986

COMMISSION BRIEFING ON

FERMI 2 STATUS

(JULY 7, 1986)

[FINAL VIEWGRAPHS]

## FERMI 2 HISTORY

LOW POWER LICENSE	MARCH 20, 1985
PREMATURE CRITICALITY EVENT	JULY 1-2, 1985
COMMISSION MEETING	JULY 10, 1985
FULL POWER LICENSE	JULY 15, 1985
UNIT SHUTDOWN	OCTOBER 11, 1985
50.54(F) LETTER ISSUED	DECEMBER 24, 1985
LICENSEE EXTENDS OUTAGE	APRIL 18, 1986
PROJECTED AVAILABILITY FOR STARTUP	LATE JULY 1986

### MAJOR PROBLEMS

1. INADEQUATE MANAGEMENT
2. ADMINISTRATIVE DEFICIENCIES - PLANT OPERATIONS
3. ENGINEERING DESIGN DEFICIENCIES
4. SECURITY PROBLEMS
5. HARDWARE PROBLEMS



PROBLEM: INADEQUATE MANAGEMENT

- ACTION:
- INCREASED INVOLVEMENT OF CEO
  - QA REPORTING TO PRESIDENT
  - ESTABLISHMENT OF IOC
  - NEW SENIOR VP HIRED (EXPERIENCED)
  - VP ENGINEERING - ACTIVE RECRUITMENT
  - SECURITY DIRECTOR - ACTIVE RECRUITMENT
  - EXPERIENCED ADVISOR TO VP

PROBLEM: ADMINISTRATIVE DEFICIENCIES - PLANT OPERATIONS

- ACTION:
- REACTOR OPERATIONS IMPROVEMENT PLAN
  - NUCLEAR OPERATIONS IMPROVEMENT PLAN
  - ENHANCED TRAINING
  - NASS AND SOA PRESENCE IN CONTROL ROOM
  - OPERATIONS STAFF CONTROLLING WORK

MAJOR DETROIT EDISON COMPANY CORRECTIVE ACTIONS  
TO PRECLUDE REPETITION OF EVENTS OF JULY 1, 1985

- MANAGEMENT IMPROVEMENTS
  - . MOVED NUCLEAR ASSISTANT SHIFT SUPERVISOR FROM SS OFFICE TO "HORSESHOE" AREA OF CONTROL ROOM
  - . DUTY STATION OF SOA MOVED TO CONTROL ROOM
  - . PUT NSS IN CONTROL OF WORK IN PLANT DURING HIS SHIFT; PARTICIPATES IN WORK PLANNING MEETINGS
  - . ROLE OF NUCLEAR SUPERVISING OPERATOR CLARIFIED
- TRAINING
  - . CONDUCTED 2-DAY WORKSHOPS FOR MANAGERS/SUPERVISORS TO INCREASE SENSITIVITY AND RESPONSIVE TO SAFETY/REGULATORY ISSUES
  - . CONDUCTED TRAINING TO ASSURE THAT ROD PULL SHEETS ARE UNDERSTOOD BY USERS
  - . PROVIDED SPECIFIC INSTRUCTIONS TO OPERATING SHIFTS CONCERNING CONTROL ROD MOVEMENT
  - . DEVELOPED A SPECIAL TRAINING FILM ON THE EVENT; REQUIRED VIEWING BY RO'S
  - . MADE SIMULATOR TRAINING CONSISTENT WITH REACTOR OPERATIONS

MAJOR DETROIT EDISON COMPANY CORRECTIVE ACTIONS  
TO PRECLUDE REPETITION OF EVENTS OF JULY 1, 1985

(CONTINUED)

- INCREASED AUDITS

- . INCREASED INVOLVEMENT OF OPERATIONS ENGINEER BY REVIEWING ACTIVITIES AGAINST PLANS
- . UNANNOUNCED OBSERVATION OF SHIFT OPERATIONS ACTIVITIES BY SUPERINTENDENT OF OPERATIONS
- . ADVISOR TO PLANT MANAGER CONDUCTS SURVEILLANCES OF CONTROL ROOM
- . MANAGEMENT TO MONITOR PLANT PERFORMANCE

- OTHERS

- . PLANT MANAGER OR SUPERINTENDENT OF OPERATIONS MET INDIVIDUALLY WITH EACH NSS, NASS, AND SOA
- . INCREASED PARTICIPATION IN REACTOR OPERATIONS BY REACTOR ENGINEER
- . PROVIDED A COVER SHEET/INSTRUCTIONS TO ROD PULL SHEETS; REQUIRES INITIALING BY USERS
- . REVISED FORMAT OF ROD PULL SHEETS FOR HUMAN FACTORS CONSIDERATION

PROBLEM: ENGINEERING DESIGN DEFICIENCIES

- ACTION:
- REVIEWED AND VERIFIED MODIFICATIONS
  - IDENTIFIED DEFICIENCIES BEING RESOLVED
  - UPDATED DESIGN CALCULATIONS
  - ENGINEERING TESTING
  - THIRD PARTY EVALUATION (ONE SYSTEM)
  - UPGRADED DESIGN CONTROLS
  - NRC INSPECTIONS

PROBLEM: SECURITY PROBLEMS

ACTION:

- EXPERIENCED SECURITY DIRECTOR - ACTIVE RECRUITMENT
- REGULATORY IMPROVEMENT PROGRAM
- INCREASED NRC SURVEILLANCE

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MAJOR HARDWARE ISSUES AND SOLUTIONS

- REPLACED TURBINE BYPASS PIPING
  - ENHANCED DIESEL GENERATOR RELIABILITY
  - REPLACED RHR PUMP MOTOR
  - REPLACED BROKEN MSIV SPRINGS; TESTED ALL OTHERS
  - COMPLETED EQ AND APPENDIX R MODIFICATIONS
  - COMPLETED SOURCE CHANGEOUT
  - DEGRADED GRID VOLTAGE (UNRESOLVED)
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MAJOR ITEMS REMAINING BEFORE STARTUP

- RESOLUTION OF REMAINING ENGINEERING/TECHNICAL ISSUES
- RECOMMENDATION FROM IOC
- BRIEFING OF MONROE COUNTY BOARD (PUBLIC)
- CEO AUTHORIZATION
- NRC AUTHORIZATION

## OTHER REMAINING ISSUES AND PLANS

### 1. ISSUES

- INVESTIGATIONS
- DOJ REVIEW
- NRC ENFORCEMENT
- 2.206 PETITION
- INPO REVIEW

### 2. PLANS

- NRC AUGMENTED INSPECTIONS
  - MANAGEMENT CONTROL OF PHASED STARTUP
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7/3/86

SCHEDULING NOTES

TITLE: DISCUSSION/POSSIBLE VOTE ON FERMI RESTART

SCHEDULED: 2:00 P.M., MONDAY, JULY 7, 1986 (OPEN)

DURATION: APPROX 1-1/2 HRS

SPEAKERS: NRC STAFF

30 MINS\*

- JAMES G. KEPPLER, REGION III ADMINISTRATOR
- RICHARD VOLLMER, NRR

LICENSEE'S INDEPENDENT OVERSIGHT COMMITTEE  
JACK CALHOUN, CHAIRMAN

15 MINS\*

LICENSEE  
WALTER J. MCCARTHY, CHAIRMAN OF THE BOARD AND  
CHIEF EXECUTIVE OFFICER  
DETROIT EDISON

15 MINS\*

SAFE ENERGY COALITION OF MICHIGAN  
MICHAEL KEEGAN, ATTORNEY

5 MINS

MONROE CITY-COUNTY

5 MINS

- RICHARD PETTICREW, CHAIRMAN  
MONROE CITY-COUNTY  
OFFICE OF CIVIL PREPAREDNESS
- JON R. ECKERT, DIRECTOR  
MONROE CITY-COUNTY  
OFFICE OF CIVIL PREPAREDNESS

\* SPEAKING TIMES SHOWN ABOVE ARE APPROXIMATE.

DOCUMENTS:

- VIEWGRAPHS
- 6/26/86 LETTER FROM SAFE COALITION OF MICHIGAN, MONROE, MICHIGAN
- 6/11/86 LETTER FROM MONROE CITY-COUNTY, OFFICE OF CIVIL PREPAREDNESS, MONROE, MICHIGAN

TRANSMITTAL TO: ✓ Document Control Desk, 016 Phillips  
ADVANCED COPY TO: \_\_\_\_\_ The Public Document Room  
DATE: 7/10/86  
FROM: SECY Correspondence & Records Branch

Attached are copies of a Commission meeting transcript and related meeting document(s). They are being forwarded for entry on the Daily Accession List and placement in the Public Document Room. No other distribution is requested or required.

Meeting Title: Discussion / Possible Vote on Fermi Restart

Meeting Date: 7/7/86 Open X Closed \_\_\_\_\_

Item Description\*:

Copies  
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to PDR

DCS  
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1. TRANSCRIPT

1

1

w/ Viewgraphs, Scheduling  
Notes

2. SECOM Presentation by Michael

1

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Keegan, dated 7/7/86

3. SECOM News Release, dated

1

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7/7/86

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\* PDR is advanced one copy of each document, two of each SECY paper.  
C&R Branch files the original transcript, with attachments, without SECY papers.