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**OFFICIAL TRANSCRIPT  
PROCEEDINGS BEFORE**

NUCLEAR REGULATORY COMMISSION

COMMISSION MEETING

PUBLIC MEETING

**DKT/CASE NO.**

**TITLE** DISCUSSION OF AND VOTE ON FULL POWER  
OPERATING LICENSE FOR SUSQUEHANNA

**PLACE** Washington, D.C.

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1 UNITED STATES OF AMERICA  
2 NUCLEAR REGULATORY COMMISSION

3  
4 DISCUSSION OF AND VOTE ON  
5 FULL POWER OPERATING LICENSE FOR SUSQUEHANNA

6  
7 PUBLIC MEETING

8  
9 Nuclear Regulatory Commission  
10 Room 1130  
11 1717 H Street, N. W.  
12 Washington, D. C.

13 Friday, November 12, 1982

14 The Commission convened in, pursuant to  
15 notice, at 9:35 a.m.

16 COMMISSIONERS PRESENT:

- 17 NUNZIO PALLADINO, Chairman of the Commission  
18 JOHN F. AHEARNE, Commissioner  
19 VICTOR GILINSKY, Commissioner  
20 THOMAS ROBERTS, Commissioner  
21 JAMES ASSELSTINE, Commissioner

22 STAFF:

- 23 W. DIRCKS  
24 H. DENTON  
25 J. ZERBE  
T. NOVAK  
R. PERTS  
D. EISENHUT  
R. STARSTECKY  
R. VOLLMER  
G. RHODES  
J. YOUNGBLOOD

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AUDIENCE SPEAKERS:

T. CRIMMINS, PP&L  
D. LANDERS, Teledyne  
B. BARBER, PP&L

\* \* \*

DISCLAIMER

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P R O C E E D I N G S

CHAIRMAN PALLADINO: Good morning, ladies and gentlemen.

We are meeting this morning to hear from the Staff on the recommendation to issue a full power authorization for the Susquehanna Unit 1 Nuclear Power Plant. At the conclusion of the meeting, we will ask the Commissioners to vote on whether to issue the full power license.

We previously met with the Staff on this matter on September 30 of this year. At that time the Commissioners were advised that the Office of Investigations was in the process of conducting an investigation of certain matters on the Susquehanna facility. Because of the potential that the investigation might uncover new issues concerning the safety of the plant, we did not vote at that meeting.

Subsequently, the Staff and the Office of Investigations have concluded that no unresolved safety problems remain open in connection with the investigation. We will be brought up to date on those matters.

Do any of my fellow Commissioners have any opening remarks?

(No response.)

1                   Therefore, I will turn the meeting over to Mr.  
2 Dircks.

3                   MR. DIRCKS: I guess Mr. Novak, Tom Novak, is  
4 going to be discussing the matter with the Commission.

5                   MR. DENTON: This is a continuation of the  
6 meeting that we previously had on Susquehanna Station  
7 Unit 1, the full power license. Since that last  
8 meeting, we have completed a review of the issues that  
9 were raised by Teledyne regarding their findings in the  
10 independent design review -- satisfactorily resolved  
11 those.

12                   An issue also has arisen with regard to design  
13 of the emergency service water system and the company  
14 has proposed a satisfactory resolution of that.

15                   We have today a number of people here from the  
16 Region who can speak to what has been happening at the  
17 plant since the last time we met. Tom Novak, Assistant  
18 Director for this area, will make the presentation,  
19 along with Don Byrd -- Bob Perts, excuse me.

20                   MR. NOVAK: Just to review, the Staff has  
21 discussed the Susquehanna licensing on September 30. At  
22 that time there was discussions of the status of the  
23 plant. There was a matter discussed with regard to the  
24 independent design review being performed by Teledyne.  
25 I would like to summarize that point for you very

1 briefly and we do have a slide which shows subsequent  
2 efforts regarding that issue.

3           At the time we met with the Commission, the  
4 Teledyne report basically had concluded that the  
5 specific system they had reviewed, which was the  
6 feedwater system inside containment, was acceptable.  
7 But, based on what they saw with regard to how design  
8 and as-built differences were reconciled, they felt  
9 there was some additional work that should be done  
10 before one could conclude that that process in fact  
11 fulfilled the requirements of the FSAR. At that time,  
12 the Licensee agreed to pick another twenty hangers, to  
13 have a review done to support the fact that in fact the  
14 process was acceptable.

15           Following the September 30 meeting, another  
16 Commission meeting was scheduled for October 7. Prior  
17 to that date the Licensee informed us that the results  
18 of the additional twenty hangers suggested to him that  
19 there was need to do more work, and he recommended that  
20 the Staff delay any presentation to the Commission  
21 regarding this effort. In fact, the result was that  
22 from that sample of twenty, a hanger design in the final  
23 as-built configuration was such that there was 25  
24 percent of the weld metal in the final configuration  
25 compared to the original design requirement.

1           The Applicant then decided to expand his  
2 sample to 500 supports and to concentrate on a  
3 distribution biased toward looking at the more difficult  
4 hangers. It resulted from his survey that he could  
5 pretty much identify that anchors were those most  
6 susceptible for differences between design and as-built  
7 configurations.

8           COMMISSIONER AHEARNE: Is this equivalent to  
9 the program that Teledyne recommended?

10          MR. NOVAK: Actually it exceeded the program  
11 that Teledyne had recommended. In discussions with  
12 Teledyne, they felt a sample of 200 would be adequate.  
13 The Licensee actually proposed a sample size of 500.

14          I do have a slide I can use to summarize for  
15 you now -- slide number one, please.

16          We have had subsequent meetings, of course,  
17 with the Licensee and Teledyne with regard to this  
18 item. We have provided to the Commission an addendum to  
19 the final report issued by Teledyne and it is there for  
20 the Commission's review. What I would like to do is  
21 summarize very quickly what the review showed.

22          CHAIRMAN PALLADINO: Are you also going to  
23 explain how to correct it?

24          MR. NOVAK: Yes, I will.

25          COMMISSIONER AHEARNE: And you will get back



1 and compare to the Teledyne. In their final report that  
2 you sent us, they say their finding can be resolved is  
3 PPEL agrees to a certain program that all anchors shall  
4 be subject to.

5 MR. NOVAK: Yes. All right.

6 Let me sort of walk you through the program  
7 and try to answer your questions that I think might come  
8 up.

9 So the program then went to look at 500  
10 supports of a variety of things. The hanger supports,  
11 they could be rigid supports, they could be spring  
12 support, and then, of course, anchors. What was done  
13 was to look at the as-built design versus the design  
14 drawing and to categorize the differences basically into  
15 three categories, as described in our safety evaluation.

16 Those Category 1 items were basically  
17 insignificant, small differences which could be  
18 reconciled very simply. Second was those which would  
19 require perhaps a simple calculation but clearly nothing  
20 that would require substantial reanalysis. But the  
21 third category would be just that -- those which on the  
22 surface an engineering judgment would be questioned,  
23 that without additional analysis you could accept the  
24 final as-built configuration as satisfying the original  
25 design drawing.

1           Now, Teledyne audited this process. They  
2 thought it was technically adequate and they reviewed  
3 the results. I would like to just summarize for you,  
4 then, what the results were with regard to the 500.

5           When they looked at the 500 hangers, it turned  
6 out that there were 22 hangers which would require  
7 additional analysis. Eleven of those were anchors. The  
8 bottom line that Teledyne drew from this analysis was  
9 that rather than continue to reanalyze anchor points  
10 their recommendation was that if you reached a point  
11 where an anchor point required reanalysis, their  
12 recommendation was to go back to the plant and make the  
13 appropriate modification to the anchor to restore it to  
14 its original design.

15           CHAIRMAN PALLADINO: Whose recommendation was  
16 that?

17           MR. NOVAK: That was Teledyne's. That  
18 recommendation was accepted by the Licensee.

19           Now inside of containment, which was the first  
20 place where the activity centered, there were sixteen  
21 anchors. Of these sixteen, three anchors were  
22 modified. Of the three, one of them was the first one  
23 that suggested to the Licensee that he delay the  
24 Commission briefing. That was the one with the 25  
25 percent weld.

1           CHAIRMAN PALLADINO: And this was internal?

2           MR. NOVAK: Internal, yes. The other two were  
3 characterized as weld dimensional variations, more of a  
4 minor difference but restored anyway.

5           As far as the analysis was concerned, that  
6 performed by Bechtel, reviewed by PP&L, even the  
7 original configuration would have satisfied code but it  
8 would not have satisfied the design requirements. So  
9 PP&L then decided to accept -- as I mentioned earlier,  
10 they had accepted a recommendation of the Licensee and  
11 performed those modifications.

12           Now the other supports were also reviewed, but  
13 no modifications had to be made. In other words, when  
14 you do a reanalysis you can also determine that the  
15 as-built configuration satisfies the original intent of  
16 the design.

17           CHAIRMAN PALLADINO: These are the rest of the  
18 sixteen internal?

19           MR. NOVAK: No, these are the others which  
20 fall into Category 3 which were not anchors. The bottom  
21 line of the review centered on the fact that the anchors  
22 were the critical support, basically. The differences  
23 occurred due to the fact that during construction access  
24 was more limited than during today's operations.

25           So the Licensee was able to go back in and

1 restore the support to the original design.

2 CHAIRMAN PALLADINO: Which are you talking  
3 about -- the eight?

4 MR. NOVAK: The three that were modified.

5 One might ask why is it easier today to  
6 satisfy the original design of the drawing as opposed to  
7 when the plant was actually in construction. My  
8 understanding is that the access was more limited during  
9 construction due to supports and other activities going  
10 on. That is not specifically the reason, but it is the  
11 judgment of the Licensee that these kinds of reasons  
12 supported why a specific design was not satisfied.

13 CHAIRMAN PALLADINO: Let me see if I am  
14 following you. There were eleven that were found to  
15 require further analysis. It was decided rather than  
16 analyze these we can fix them up. Three of them were  
17 internal to the containment and they were fixed up. I  
18 did not follow what happened to the other eight, if I  
19 got the story right.

20 MR. NOVAK: No. Only three did not satisfy or  
21 fell into Category 3, which would require a reanalysis.  
22 Even within Category --

23 CHAIRMAN PALLADINO: I thought you said there  
24 were eleven.

25 COMMISSIONER AHEARNE: Yeah. What you had

1 said -- what I believe you said -- is that 22 out of the  
2 500 required additional analysis. Eleven of those were  
3 hangers. Teladyne recommended, if reanalysis was  
4 needed, instead to go back and make the modifications.  
5 So the impression I got --

6 CHAIRMAN PALLADINO: Eleven were anchors.

7 MR. NOVAK: Okay, you are right. Eleven were  
8 anchors. Only three of the eleven required reanalysis,  
9 which were inside containment.

10 MR. EISENHUT: Maybe I can help straighten  
11 that out a little bit. The original program looked at  
12 anchors and supports -- a broad number. Out of that  
13 came -- I get a different terminology -- maybe eleven  
14 questions. Some of the original family were inside  
15 containment, some were outside, some were supports, some  
16 were anchors.

17 CHAIRMAN PALLADINO: Where did 22 come in?

18 MR. EISENHUT: My system does not have a 22.

19 COMMISSIONER AHEARNE: Darryl, I think your  
20 system does not have any numbers.

21 MR. EISENHUT: Yes, it does. There were three  
22 total modifications required. Those three modifications  
23 turned out all to be on anchors, all inside  
24 containment. And as the program evolved, the emphasis  
25 zeroed in on the question, was anchors, not supports in

1 general but a particular subset, which was anchors.

2 At that point, then, the emphasis switched to  
3 anchors. The proposal which Commissioner Ahearne  
4 referred to, the proposal from Teledyne, was that there  
5 be a recheck of anchors inside and a recheck outside.

6 Now inside containment there is on the order  
7 of sixteen, I believe it is, total anchors.

8 COMMISSIONER AHEARNE: Total, not in the  
9 subset but total?

10 MR. EISENHUT: Total anchors inside  
11 containment. Three of those anchors were the ones that  
12 we just mentioned from the big family that in fact had  
13 to be modified. Those three can be looked at as -- one  
14 of those was the case that had a quarter of the weld  
15 there. The other two were cases where there were very  
16 small dimensional tolerances on the weld. The weld was  
17 present and it was shown to be acceptable. It could be  
18 shown by some detailed analysis.

19 But those are the three inside containment.  
20 Those sixteen have all been rechecked, that is, all  
21 anchors inside containment have, to date, been rechecked.

22 COMMISSIONER ASSELSTINE: And the other  
23 thirteen were okay?

24 MR. EISENHUT: The other thirteen were okay.

25 Now outside containment on anchors, there is

1 on the order of about 150. Of that 150, they have been  
2 looked at to the point today where I think about half of  
3 them have been rigorously looked at -- maybe a little  
4 more than half.

5 Now remember the system. The Teledyne report  
6 breaks them into Categories 1, 2 and 3. Category 1s and  
7 2s are basically where you can show by some engineering  
8 judgment or minor analysis things are acceptable. Of  
9 the 150, they projected about half were going to come  
10 out in Category 1 and 2, and about half would come  
11 out -- roughly half would come out in Category 3.

12 To date, a total of something on the order of  
13 half of all of the anchors outside containment have been  
14 rechecked, have gone through the process. That effort  
15 is not complete today. Also, it is projected by  
16 Teledyne that of the anchors outside containment  
17 something on the order of five to six may end up  
18 questions that could work their way down to,  
19 potentially, modifications. It is in that ball park,  
20 based on the detailed evaluation today.

21 COMMISSIONER AHEARNE: How does that track  
22 with what you just said earlier, where they projected  
23 that about one-half would be Category 3?

24 MR. EISENHUT: There is going to have to be  
25 some additional evaluation. Maybe on the order of five

1 to six would end up as modifications.

2 COMMISSIONER AHEARNE: So you are saying for  
3 outside containment it is not being followed, that if it  
4 falls into Category 3 modification is automatic?

5 MR. EISENHUT: Not necessarily, and the  
6 program is still under way. The utility has made a  
7 commitment to complete that program of evaluating the  
8 anchors outside containment and have that process  
9 complete by December 31 of this year, and I believe that  
10 includes modifications, if any, would also be completed  
11 during that period of time.

12 CHAIRMAN PALLADINO: Do these five or six  
13 anchors outside containment that you project, are those  
14 projected to require some rework?

15 MR. EISENHUT: Well, since they are projected  
16 by Teledyne, if the Commission would choose, the Senior  
17 Vice President, Don Landers, of Teledyne is here with me  
18 and could characterize better.

19 COMMISSIONER GILINSKY: And people from the  
20 company as well, if we could do that.

21 MR. EISENHUT: I would characterize it as  
22 potential problems as you go down the line that could  
23 require modification.

24 MR. DENTON: Well, if you would like to hear  
25 from the company, perhaps they could go first and we



1 could get the numbers straight.

2 MR. EISENHUT: I think it might be different  
3 because it is evolving every day.

4 COMMISSIONER GILINSKY: Well, I think as a  
5 general matter, we did not arrange for it, but I think  
6 it would be useful at these sessions to have the company  
7 appear at the table.

8 MR. DENTON: I certainly agree with you on the  
9 details of what the company is doing. I think the point  
10 we wanted to make here is I think the independent design  
11 review process has worked. Teledyne found something  
12 that was a looseness in the design verification program  
13 and it is being fixed, and Teledyne has indicated their  
14 satisfaction with that.

15 But I think when you get into real details  
16 about exactly which hangers and how, that really should  
17 turn on the company.

18 CHAIRMAN PALLADINO: Well, I did not want to  
19 get into such great detail. I just wanted to find out  
20 what has to be done on anchors outside the containment  
21 and when must it be done, and we seem to have some  
22 confusion on how much ought to be done. And I think  
23 there would be some value in straightening that out.

24 MR. DENTON: Let me ask the company. Why  
25 don't we start with representatives from the company?

1 Basically, our requirement is fix everything inside the  
2 containment before going anywhere, and that has been  
3 done, I believe, to Region's satisfaction, and then fix  
4 the remaining areas outside containment by the end of  
5 the year. We are making considerable progress in that  
6 area already.

7 CHAIRMAN PALLADINO: Let us see who we have.

8 MR. CRIMMINS: My name is Tom Crimmins. I am  
9 Manager of Nuclear Plant Engineering for PP&L.

10 What has been said is basically correct. Let  
11 me confirm the numbers. There are sixteen anchors  
12 inside containment, of which three required fixes. They  
13 are all weld fixes, and I might clarify a little bit on  
14 this, the accuracy of the statement that 25 percent of  
15 the weld was there. That sounds more onerous than it  
16 really is.

17 It was one specific weld which was an  
18 important weld, obviously, in the fabrication of this  
19 anchor and the analysis of this anchor. But it was not  
20 as if the entire anchor only had 25 percent of the weld  
21 that was required. It was one specific weld which  
22 mounted the anchor to its structure. Three fixes have  
23 been done and were done prior to our restart to five  
24 percent power approximately a week ago or ten days ago.

25 Outside containment there are exactly 147

1 anchors. Thirty of these were covered in the original  
2 500 sample that was discussed by Mr. Novak. So,  
3 therefore, there are 117 left to be evaluated. They  
4 have all been evaluated. Fifty-six of them have been  
5 classified as Category 1 and 2. That is, they need  
6 only -- they can be dispositioned as trivial differences  
7 or by very simple calculations and judgment and there is  
8 no concern with those.

9           Sixty-one have been categorized as Category  
10 3. Category 3, throughout this program, has been a very  
11 conservative categorization of anything that had a  
12 question about it. It is not to be interpreted as  
13 anchors with significant deficiencies or anchors that  
14 need to be fixed. It is a conservation categorization  
15 of anchors that need to be further looked at.

16           In terms of our efforts here to determine  
17 which ones ought to be fixed as a result of the last  
18 Teledyne proposal, we established and agreed upon with  
19 Teledyne and the Staff that if calculations were beyond  
20 what was used for the original design method were used,  
21 then that would mean extensive calculations which were  
22 beyond an acceptable level, and those anchors would be  
23 fixed rather than go into a detail, as I think we have  
24 used the term here before, pencil-sharpening to try to  
25 justify the adequacy of the anchor. Rather than do that

1 and go beyond the original design methods, we would fix  
2 them.

3 Out of the 61, we have not completed our  
4 review. We are most of the way through and anticipate  
5 on the order of five to six fixes, all of which will be  
6 weld-type fixes, upgrading of welds on the anchors.

7 COMMISSIONER GILINSKY: You say you anticipate  
8 five or six. Is that on the basis of evaluation?

9 MR. CRIMMINS: It is on the basis of what we  
10 have seen of the 61 to date.

11 COMMISSIONER GILINSKY: Do you have five or  
12 six welds in mind?

13 MR. CRIMMINS: Let me say specifically what  
14 has been done. Bechtel has reviewed them and identified  
15 four which they believe would need some upgrading in the  
16 welds. Our staff is now reviewing that and we have  
17 found one additional one that we feel is likely to need  
18 some upgrading in the welds rather than go back with  
19 extensive evaluation.

20 I would point out that given the time and the  
21 desire to do it this way that these could easily --  
22 these could be justified on an analytical basis as being  
23 adequate, but that is not our approach at this point.  
24 We are preferring to go back and make the corrections to  
25 meet the original design intent, which, I would point

1 out, is a quite conservative design approach.

2 We are well on schedule to complete that, to  
3 identify the necessary fixes, in the next couple of  
4 weeks and also to fix those prior to December 31.

5 CHAIRMAN PALLADINO: Prior to December 31, and  
6 is there any problem in getting at them?

7 MR. CRIMMINS: No, sir. We feel that either  
8 we can get the welds exactly the way they were, the  
9 original design, or there are obviously alternatives if  
10 we do have an access problem. But we do not anticipate  
11 one.

12 CHAIRMAN PALLADINO: Thank you.

13 MR. CRIMMINS: Yes, sir.

14 CHAIRMAN PALLADINO: Are there any questions?

15 COMMISSIONER AHEARNE: Yes. While the  
16 representative of the company is here, could you tell me  
17 what the latest status is of the expiration with the  
18 ASME with respect to the other issue that is raised?

19 MR. CRIMMINS: No, I did not have recent  
20 information on that. My understanding is that issue was  
21 raised by Bechtel with the ASME and there have been some  
22 discussions, but I do not have up-to-date information.

23 CHAIRMAN PALLADINO: I could not hear you.

24 MR. CRIMMINS: I do not have up-to-date  
25 information. I know the issue has been discussed

1 between Bechtel and ASME, but I do not have any further  
2 information.

3           COMMISSIONER GILINSKY: What issue are you  
4 referring to?

5           COMMISSIONER AHEARNE: That was one of the  
6 earlier Teledyne's -- on the basis of the previous  
7 meeting we had, that Teledyne had raised, and the report  
8 that we have from the Staff is something like October 27  
9 or so. There was supposed to be a letter written.

10           MR. NOVAK: Mr. Landers also serves on that  
11 ASME Code Committee, so maybe he could supplement the  
12 Licensee's response when it is his turn to speak.

13           CHAIRMAN PALLADINO: Well, now is a good  
14 time.

15           MR. DENTON: Mr. Landers from Teledyne.

16           MR. LANDERS: My name is Don Laniers, Senior  
17 Vice President, Teledyne Engineering Services.

18           I would agree with the categorization and the  
19 discussion that Tom Crimmins gave with respect to the  
20 issue raised by Commissioner Ahearne. The important  
21 point to recognize with respect to Susquehanna is that  
22 all along our opinion was there was no safety issue with  
23 respect to this. In fact, we knew that recategorization  
24 of that condition would not affect plant at all.

25           Our concern was having in our own files

1 documentation from Bechtel or from the owner that  
2 substantiated our position. So with respect to that  
3 finding, we were satisfied and had been for some time.

4 COMMISSIONER AHEARNE: I noticed your  
5 reservation, but could you tell us what the status is  
6 with respect to ASME?

7 MR. LANDERS: I do not know myself. I was  
8 down here this week, during Code week.

9 CHAIRMAN PALLADINO: I am not sure how that  
10 was resolved. I am reading from part of the packet that  
11 says the second area of concern expressed by TES in  
12 their final report was that the design and specification  
13 requirements were not in compliance with the ASME Boiler  
14 and Pressure Code. Bechtel did not agree with the TES  
15 finding and felt that the code requirements had been  
16 satisfied.

17 And then there was a series of letters and  
18 then I am not clear where we stand on that.

19 MR. NOVAK: Perhaps I could summarize, sir.

20 As part of the final report, the Teledyne view  
21 was that a loss of feedwater accompanied by a main steam  
22 isolation valve closure event should be categorized as an  
23 upset transient, that which has a higher probability of  
24 occurrence, as opposed to emergency condition, which was  
25 Bechtel's argument.

1           As far as the Licensee was concerned, he went  
2 back and reanalyzed that event to upset, including  
3 fatigue, and satisfied the requirements. So there was  
4 clearly, as TES said, no safety concern. We view it as  
5 a generic concern.

6           Bechtel still believes that should be  
7 considered as an emergency, one that falls under  
8 emergency conditions, having a lower probability than  
9 upset. So that as far as the Licensee is concerned he  
10 has stepped back. He thinks both ways are acceptable.  
11 Bechtel thinks they are correct. They are going to take  
12 it to the Code.

13           CHAIRMAN PALLADINO: As far as the plant is  
14 concerned, we are okay. The plant is okay under either  
15 assumption?

16           MR. NOVAK: That is correct.

17           Moving along, we would like to go into  
18 operating experience. There is one other area we would  
19 like to talk about, which is the emergency service  
20 water, but I think it will permit you to understand why  
21 it came up. As you look at recent operating experience,  
22 it is because of that experience that this issue  
23 evolved.

24           CHAIRMAN PALLADINO: I am sorry. I was not  
25 listening.



1           MR. NOVAK: What I was going to recommend,  
2 sir, was that we go on and discuss operating experience  
3 update since the last Commission briefing. As part of  
4 that update you will see that there were some tests  
5 performed which really brought to light the concern that  
6 we want to talk lastly, and that is emergency service  
7 water single failure concern.

8           MR. STARSTECKY: Rich Starstecky, Region I,  
9 and I have with me today Gary Rhodes, who is the Senior  
10 Resident Inspector from Susquehanna, and Mr. McCabe, who  
11 is his immediate supervisor and section chief.

12           Susquehanna, since the last update, has been  
13 operating since November 1 at the five percent power  
14 level. They have been doing their tests and the tests  
15 to date have been acceptable.

16           There were two license conditions that the NRC  
17 imposed on the Licensee during this time period. One  
18 was to look at a water hammer problem in the emergency  
19 service water system, and the test was conducted and  
20 they have corrected the situation.

21           As a result of focusing attention on that  
22 emergency service water system, the Licensee has  
23 identified a potential problem with single failure of a  
24 valve which could jeopardize cooling water to the  
25 diesels which, in turn, would jeopardize the operability

1 of certain safety-related components. NRR has looked at  
2 that situation, has had meetings with the Licensee. So  
3 we have satisfied ourselves on the one hand from the  
4 safety standpoint that there is no outstanding safety  
5 issue.

6           We had pursued and will be pursuing with the  
7 Licensee the water hammer long-term fix. The problem  
8 revolves around the fact that there were valves designed  
9 to be opened and, as a result of the design review, it  
10 was decided to keep the valves normally closed and when  
11 they were called upon the valves would in fact open and,  
12 coincident with the starting of the emergency service  
13 water pump, would result in a water hammer problem.

14           This information is discussed in more detail,  
15 I believe, in the NRR report. The Region at this point  
16 is satisfied that the problem is being resolved or has  
17 been resolved for the short term.

18           We had one other issue, and that was the  
19 grounding of some cable sheathing for the reactor  
20 protection system, and that was conducted and repaired  
21 previously, prior to these operations.

22           There have been two scrams, both of them  
23 related pretty much to instrumentation and control  
24 system technicians performing maintenance or testing and  
25 there have been no malfunctions in the plant

1 themselves. In both instances, it appears that the  
2 plant and the operators performed appropriately and  
3 properly.

4 We have had about three to four people on site  
5 observing operations and have had no adverse findings  
6 and have satisfied ourselves that the plant is in fact  
7 ready.

8 If there are any specific questions --

9 CHAIRMAN PALLADINO: It is not clear to me how  
10 you resolved the emergency service water. I found it a  
11 little bit confusing because it seems to be discussed at  
12 two different places in the SER.

13 MR. NOVAK: That is correct, sir. We can go  
14 forward with that discussion. One is a discussion of  
15 the emergency service water as a system, and the second  
16 part of the discussion in the SER is the ECCS  
17 performance evaluation. They are dependent on each  
18 other.

19 We are prepared to summarize for you those  
20 discussions.

21 CHAIRMAN PALLADINO: Will it take long just to  
22 give me a clue?

23 (Laughter.)

24 MR. NOVAK: If I do not have to use numbers.

25 CHAIRMAN PALLADINO: Then just give me a

1 qualitative. The reason is -- I will tell you why I  
2 raise the question. It says in one place here, on page  
3 6-3, it says: "Based on the reliability of the LPCI  
4 proper operation without auxiliary cooling for ten  
5 minutes and the results of ECCS analyses provided in the  
6 FSAR, the Staff finds the design of the ECCS system to  
7 be acceptable."

8           And going without auxiliary cooling for ten  
9 minutes and saying the pumps can do it, can you really  
10 say that we have gotten --

11           MR. NOVAK: I do not think I can give you a  
12 quick answer that will satisfy you. It will take a  
13 couple of minutes to explain what the event was.  
14 Perhaps if we go on we can summarize it and try to  
15 answer your question again.

16           CHAIRMAN PALLADINO: You mean later?

17           MR. NOVAK: Right now we are prepared to go  
18 on. Let me have the second slide, please.

19           As you see on the bottom --

20           CHAIRMAN PALLADINO: You had better read it.

21           MR. NOVAK: Part of the licensing condition  
22 was the power operation test in the pre-op in the  
23 emergency service water. As part of the pre-op test  
24 they did determine again that the design was not  
25 adequate. There was a water hammer and it required an

1 additional modification.

2           And in the review of the system, the single  
3 failure concern was determined by the Licensee. They  
4 determined from their review of this system that in fact  
5 a single failure had been met, and I am prepared to  
6 discuss that with you very quickly.

7           The third slide, please. We will discuss very  
8 simply the emergency service water system, what the  
9 single failure concern was, and the resolution of the  
10 single failure, which goes into the ten-minute  
11 discussion.

12           May I have the next slide, please?

13           Now, the emergency service water --

14           CHAIRMAN PALLADINO: Well, go ahead.

15           MR. NOVAK: What the emergency service water  
16 does is it provides a cooling source to a number of  
17 important safety systems, for example, the diesel  
18 generators, the cooling water jackets. The water there  
19 is provided by emergency service water. And what you  
20 see here is a schematic of the emergency service water  
21 system.

22           I would like to just briefly summarize this  
23 for you. As you see on the bottom of the sketch, there  
24 are four emergency service water pumps. They are split  
25 into two trains. They provide cooling water to the four

1 diesels, to the ECCS coolers, to what is called a  
2 controlled structure chiller as part of the reactor  
3 building cooler. Then they go out to the spray pump.

4           Then, at the top of the slide are labeled  
5 bypass valves. In the original design, those valves  
6 were normally open and there was no power to that  
7 valve. And so a single failure would not apply to that  
8 system. In other words, you do not have to assume the  
9 valve was closed. If it was locked open, it was an  
10 acceptable design.

11           But because of elevation differences,  
12 primarily in what is called the control structure  
13 chiller, that system would drain. And then if you  
14 initiated the emergency service water system a water  
15 hammer occurred. So back in the 1977 time frame it was  
16 identified that this system had a potential for water  
17 hammer, and the modification that was made was to close  
18 the bypass valves. That way you would tend to keep the  
19 system solid and when you bring it on you should avoid  
20 the potential for water hammer. But it must be done in  
21 the right sequence.

22           Now these latest pre-op tests I am going to  
23 ask Bob Perts to summarize for you specifically what  
24 happened. You will see that a water hammer problem  
25 reoccurred in what was thought to be an acceptable

1 side.

2 Bob?

3 MR. PERIS: Okay. During pre-op testing the  
4 pumps -- when the system was operated during the pre-op  
5 testing there was an occasion where they had to secure  
6 the pumps. The discharge valves to those pumps remained  
7 open. The water in the system drained back to the spray  
8 pond from the high legs. When the pumps restarted again  
9 they had a water hammer problem.

10 In resolving the second iteration of water  
11 hammer, they went to motor-operated discharge valves for  
12 the pumps so that they would close down or throttle when  
13 the pumps stopped. The pumps were also sequenced such  
14 that they all do not come on at the same time and with  
15 the combination of those two actions they were able to  
16 mitigate the water hammer from the system being in  
17 operation -- the pumps stopping and then being  
18 restarted.

19 MR. NOVAK: Now I would like to spend a few  
20 minutes on the single failure concern. With the design  
21 modification as it occurs now, the bypass valves are  
22 normally closed. All of the cooling water to the four  
23 diesels are provided from emergency service water pumps  
24 A and C and as long as you have flow from either pump  
25 you will have adequate flow to cool the diesels.

1           If, however, you do not have flow from A to C,  
2 there is a logic that trips and you pick up emergency  
3 service water flow from pumps B and D. The logic is if  
4 the trip breaker closes, it is assumed then that the  
5 pump has started and it is delivering flow. But that is  
6 not the case if the bypass valve fails to open. In  
7 other words, you would be deadheading the pump. But the  
8 logic would suggest I have flow because I have power at  
9 the pumps.

10           This is what was uncovered by the Licensee --  
11 a weakness in the failure modes and effects analysis not  
12 recognizing now that by closing that valve, the bypass  
13 valve, and not assuming that it could fail to open, you  
14 could fail to deliver the necessary cooling to the  
15 diesels. You could lose all cooling to the four  
16 diesels.

17           What has been done now is they have modified  
18 the design to put a flow meter that was installed in the  
19 connecting line. So you will, if you sense low flow,  
20 then you transfer immediately to emergency service water  
21 systems, being a certainly more direct way of doing it.  
22 So the modification that has been installed now is based  
23 on a flow rate in the combined line there leading up to  
24 the four diesel generators.

25           Between A and C there is a flow meter, and if



1 it measures low flow, then the transfer is automatically  
2 made to pick up flow from emergency service water pumps  
3 B and D.

4 Now what we were talking about in the ECCS  
5 analysis is the fact that as part of the review of  
6 emergency core cooling system it was demonstrated as  
7 part of the safety analysis report that low pressure --  
8 okay, now it is going to take a little bit more time and  
9 we are going to have to go to the next slide.

10 Now, this is the schematic of the BWR with the  
11 emergency core cooling systems. What we traditionally  
12 do is we identify a break in any part of the primary  
13 coolant system and then we search for any single  
14 failure. You can have a single failure of a valve, of a  
15 diesel, of a pump. And you look at the remaining  
16 available emergency core cooling systems and decide that  
17 you can satisfy basically Appendix K ECCS criteria.

18 So this is done. We traditionally do this as  
19 part of every safety analysis review, and it is tedious  
20 because depending upon where you choose your break, you  
21 can either have or not have certain ECCS system  
22 availability.

23 Now, what we have been able to show from the  
24 reanalysis done by the Licensee is that given that --  
25 now I am going to draw your attention to what are called

1 low pressure injection pumps A and C, for example.  
2 These are the pumps we talked about as being able to  
3 operate for ten minutes without any cooling to them  
4 provided by the emergency service water.

5           Now what we have been able to demonstrate, the  
6 Licensee has demonstrated and we agree, is that for any  
7 combination, combination of pipe break coupled with a  
8 single failure, the resulting ECCS equipment which may  
9 rely on a LPCI pump, as long as it runs for ten minutes,  
10 you will provide sufficient water to the vessel such  
11 that the remaining emergency core cooling systems would  
12 continue to cool the core.

13           What it really amounts to, sir, is that the  
14 low pressure core injection provides a sufficient level  
15 in the vessel or brings the water level back up high  
16 enough such that things like core spray that would  
17 continue to cool the core.

18           Now the Licensee is not satisfied with this  
19 design as it currently exists. He wants to restore the  
20 emergency service water system to its original design --  
21 that is, be able to sustain any single failure and not  
22 suffer loss of something like a low pressure core  
23 injection pump because it failed to receive cooling. In  
24 other words, the logic is a little strange, but if you  
25 lose a low pressure core injection -- an emergency

1 service water pump, the low pressure core injection pump  
2 which was receiving water from it would start up and  
3 deliver, and we would take credit for it in certain  
4 conditions, but only for ten minutes.

5           Then we assume it fails. Now the Licensee  
6 last week ran a test. Specifically, he took a low  
7 pressure core injection pump without any cooling to the  
8 bearings, to the seals, to the room. He ran it for  
9 10-1/2 minutes.

10           CHAIRMAN PALLADINO: And then it failed?

11           MR. NOVAK: No, he secured it. No, actually  
12 he extrapolated that he could go as far as 20 to 25  
13 minutes before exceeding any design temperature limit by  
14 the vendor of the pump or the motor.

15           COMMISSIONER AHEARNE: Normally would you  
16 accept a 10-1/2-minute test as proof that something  
17 could operate for ten minutes?

18           MR. NOVAK: It depends.

19           MR. DENTON: I do not think we would for forty  
20 years, but in this case when they are going to restore  
21 it in the near future, we did.

22           CHAIRMAN PALLADINO: They have plans to fix  
23 this up?

24           MR. NOVAK: Yes. They have not decided on  
25 specifically what design modification.

1           CHAIRMAN PALLADINO: But you are accepting the  
2 present condition?

3           COMMISSIONER AHEARNE: I guess normally,  
4 Harold, I would have expected that you never accept a  
5 10-1/2-minute test as proof for ten minutes.

6           MR. DENTON: Well, in this case we did.

7           MR. NOVAK: Well, let me explain, sir.  
8 Actually, the test did not simulate all conditions. The  
9 suppression pool temperatures were much lower, so a  
10 number of things were done to extrapolate. But given  
11 you extrapolate and I agree, I think, if I bump the  
12 limit at 10-1/2 minutes I might be concerned.

13           What they did was they ran the test for 10-1/2  
14 minutes and if they continued they estimated they would  
15 reach temperature limits in 20 to 25 minutes. Clearly,  
16 part of our thinking is that there is a long-term  
17 modification proposed by the Licensee. He has not  
18 selected the specific modification, but he intends to  
19 restore the design to its original intent, the as-built  
20 configuration.

21           COMMISSIONER AHEARNE: Do you have some time  
22 at which you are going to require that?

23           MR. NOVAK: He has committed to providing  
24 us -- by a certain date we will have an identification  
25 of the design modification. Accompanying that will be a

1 schedule for the implementation.

2           COMMISSIONER AHEARNE: Do you have some  
3 estimate, though, on your own of for how long? Harold  
4 just said he would not accept that for forty years. Do  
5 you have some estimate of how long you would accept it?

6           MR. NOVAK: I would like to recommend -- I  
7 first would like to hear from the Licensee as to the  
8 range of times he expects. He has three proposals, at  
9 least, in mind and I think perhaps he could answer as to  
10 possible scheduling times.

11           COMMISSIONER AHEARNE: I am not asking his  
12 possible schedule. Harold just pointed out you would  
13 not accept it for forty years. I am just asking do you  
14 have some estimate? In other words, are you saying that  
15 you are going to require that you can tolerate this  
16 until the first refueling outage?

17           MR. NOVAK: I would say until the first  
18 refueling. I would say the risks involved from now till  
19 the first refueling are acceptable. The system will  
20 operate. It will meet the requirements. The ECCS  
21 system will perform. I think it is the desire of the  
22 Licensee and us that we restore this design to its  
23 original intent.

24           COMMISSIONER GILINSKY: Can we hear from the  
25 company what their thinking is on this point?

1           MR. CRIMMINS: My name is Tom Crimmins,  
2 Manager, Nuclear Plant Engineering, PP&L.

3           We agree with the Staff. We do have several  
4 concepts which we discussed with them which we are now  
5 evaluating in terms of procurement restraints or design  
6 restraints and construction schedule. There is no  
7 question that we would have these modifications done by  
8 the first refueling outage and feel quite comfortable  
9 with that schedule.

10          CHAIRMAN PALLADINO: Thank you.

11          MR. NOVAK: Those were the specific items we  
12 wanted to bring to the Commission's attention. We are  
13 available to answer any other questions.

14          CHAIRMAN PALLADINO: Two other questions that  
15 came out of the SER, and I am trying to make sure I get  
16 the right part. I think it is on the bottom of 4-2 and  
17 the top of 4-3. "The Staff has reviewed the information  
18 provided by Licensee in the above-discussed report and  
19 concludes that the interim operation of Susquehanna Unit  
20 1 with unqualified equipment relative to the postulated  
21 scram discharge volume pipe break environment is  
22 justified for one fuel cycle."

23                 I was wondering why was it justified for using  
24 unqualified equipment.

25          MR. NOVAK: Dick Vollmer will respond, sir.

1           MR. VOLLMER: This is an item that had not  
2 been put into the qualification program until, oh, a  
3 year or so ago when we had the Brown's Ferry incident, I  
4 believe it was, in the scram discharge volume. As a  
5 result of that, we have gone back and looked at  
6 qualification of equipment in this area and have found  
7 some to be not qualified.

8           In the specific case of Susquehanna we believe  
9 that because of the low likelihood of a failure of scram  
10 discharge volume and because of the minimal  
11 environmental requirements on the equipment, even though  
12 they do not meet the full range of parameters that would  
13 be expected if it broke, we feel that basically from a  
14 probability and consequence point of view it is  
15 acceptable to allow it to go for one refueling cycle.

16           COMMISSIONER GILINSKY: They are not  
17 seismically qualified. Is that right?

18           MR. VOLLMER: Seismically? I cannot respond  
19 to that on environmental qualifications.

20           COMMISSIONER GILINSKY: I am talking about the  
21 scram discharge volume.

22           MR. VOLLMER: In that category of piping I  
23 suspect they are no seismically qualified. Somebody  
24 else might respond to that. I do not believe it is  
25 seismically qualified.

1           MR. NOVAK: It is not part of the reactor  
2 cooling system pressure.

3           MR. VOLLMER: The reactor piping system would  
4 not be seismically qualified.

5           CHAIRMAN PALLADINO: Dick, will they be  
6 qualifying this equipment in the first fuel cycle?

7           MR. VOLLMER: That is correct.

8           CHAIRMAN PALLADINO: Are we treating them any  
9 differently from anybody else on this matter?

10          MR. VOLLMER: No. As a matter of fact, I  
11 guess LaSalle had the same consideration at that time,  
12 and we are using the same basis.

13          COMMISSIONER GILINSKY: Well, let's see. If  
14 that equipment fails, if the scram discharge volume  
15 should fail, then the unqualified equipment is in  
16 jeopardy, and what does that do to functioning of, say,  
17 emergency cooling systems?

18          MR. VOLLMER: I do not believe the lack of  
19 qualification would jeopardize the emergency cooling  
20 system. It could jeopardize, let's see -- I am trying  
21 to figure out exactly what. I think reactor shutdown  
22 and cooldown would be protected, although certain ECCS  
23 equipment would not be fully qualified to function.

24                 But there are alternate paths to achieve  
25 shutdown and cooldown. That and the low likelihood of



1 occurrence was really the basis for the Staff's  
2 recommendations.

3 MR. DENTON: And page 3 of the SER does  
4 indicate that the Susquehanna safety discharge volume  
5 piping is designed to seismic category 1 requirements.

6 MR. VOLLMER: Is it seismic category 1?

7 MR. DENTON: The piping. Down near the bottom  
8 of that paragraph. Perhaps the equipment in the area is  
9 not, but the piping is.

10 MR. VOLLMER: Yes. Okay, right.

11 COMMISSIONER GILINSKY: Down there it says  
12 vent and drain valves are not. The way out of this is  
13 to get the equipment qualified, you said. By when?

14 MR. VOLLMER: Get full qualification of  
15 equipment by the first refueling outage.

16 CHAIRMAN PALLADINO: And what is the  
17 alternative path for shutdown, you say, if we have  
18 trouble with this equipment?

19 MR. EISENHUT: Let me make a qualifying  
20 comment. This did not come out of the Brown's Ferry  
21 concern. It does not relate to the capability of  
22 shutting down the reactor.

23 This came out of the Michaelson review,  
24 NUREG-803, where there was a concern that following a  
25 scram, when it works right, the system is pressurized

1 and you could have basically a loss of coolant from that  
2 flow path that comes down through the scram system.  
3 Then you could get, because of that accident, which was  
4 not previously postulated and the scram discharge had  
5 not historically been a part of the pressure boundary,  
6 not under the thorough inspection, not of the highest  
7 quality in the same sense of the rest of the system.

8           The plants are heading in the direction of  
9 upgrading that. They are heading in the direction of  
10 looking at the probabilities and we had a probabilistic  
11 study that was done, that was done by the GE owners as a  
12 group, showing that the probability of the event is  
13 probably  $10^{-6}$ . It is very small --  $10^{-5}$ ,  $10^{-6}$   
14 range.

15           The concerns are twofold. One is if during  
16 that very short period of time, during the scram, the  
17 system gets pressurized it could fail. If it fails, of  
18 course, you get high pressure steam, humidity on some  
19 equipment in an area which does not normally have to  
20 undergo that kind of qualification. So we took that  
21 equipment, put it in the environmental qualification  
22 area.

23           The second ultimate concern would be if the  
24 system fails it is literally flooding on the floor,  
25 which was Paul Michaelson's original concern -- was that

1 you start flooding the building because if you then have  
2 valve failures or if you then have leakage through the  
3 control drive seals, you have a path of primary coolant  
4 coming down to the floor of the building and, in fact,  
5 you are in a little of a race.

6           You are depressurizing the reactor to get the  
7 pressure down as fast as you can and the longer it takes  
8 to get down the more water gets out. So it is a concern  
9 we felt was low probability but it was one we wanted to  
10 follow up on.

11           Up until the last few months, the Licensees,  
12 the new applicants, were heading in the direction of  
13 showing that the probability was so low it need not be  
14 considered. Remember when we discussed this back in  
15 September, the point was that we were likely going to  
16 tell them that the PRA would not completely hack it. We  
17 have subsequently told them that. They have put this  
18 equipment into the equipment qualification program, but  
19 we believe that the probability of it, taken together  
20 with the fact that the system, even though we say it is  
21 not a seismic 1-qualified shown system -- it does not  
22 meet all the high standards -- it may well turn out to  
23 be of equal qualification.

24           The Licensee is verifying the category 1  
25 nature of it. It is something that we feel we have the

1 time to qualify the equipment and it has been put in the  
2 program. It may not be exactly like the first BWR we  
3 reviewed because our position has been evolved, but this  
4 is the position we are taking now on all the plants and  
5 we will be taking on all the operating reactors as  
6 well.

7 COMMISSIONER AHEARNE: Darryl --

8 MR. VOLLMER: Let me respond to the Chairman's  
9 specific question. The ECCS would be available for a  
10 short period of time, as indicated in the SER. And if  
11 the equipment were to fail, then the condensate pumps  
12 outside of containment would be available to keep the  
13 reactor water level adequate. So that is really the  
14 backup availability of cooling and core water level.

15 MR. DENTON: So in effect it is a non-isolable  
16 small accident cooling event and there are a lot of ways  
17 to get water into the core to have the equipment  
18 working, and that is the EQ task, to make sure that none  
19 of this can prevent the systems from working that would  
20 normally use the supply water, including normal  
21 condensate.

22 CHAIRMAN PALLADINO: So we do have a backup.

23 MR. DENTON: Yes, sir.

24 COMMISSIONER AHEARNE: Darryl, you mentioned  
25 the PRA, so that leads me to a question I have on the

1 SER, and this is number 4, looking at pages 4-1 and  
2 4-2. I am a little confused. One minor question and  
3 then a second one.

4           The minor question is I gather that we have  
5 been having a number of discussions with respect to a  
6 number of people on PRA and it appears that we document  
7 our things by telephone conversation. Is that it?

8           MR. EISENHUT: No, but it certainly would  
9 appear that way.

10           COMMISSIONER AHEARNE: I would hope we would  
11 have some other documentation other than a telephone  
12 conversation.

13           MR. EISENHUT: And I think it is not a PRA so  
14 much as it is a probability study.

15           COMMISSIONER AHEARNE: Well, the first item  
16 is, as a standard practice I would hope we would not use  
17 telephone conversations as the basic --

18           MR. EISENHUT: I agree 100 percent.

19           COMMISSIONER GILINSKY: What are you referring  
20 to?

21           COMMISSIONER AHEARNE: On page 4-1, it says  
22 "The Staff noted in a telephone conversation with the  
23 Licensee," and in the past we have had enough problems  
24 keeping track with agreements back and forth. That is  
25 not a good one. But it says that the Staff informed the

1 Licensee that regardless of the outcome of the PRA  
2 essential equipment should be included in the  
3 qualification program.

4 Then, on page 4-2, we say because of the very  
5 low probability calculated by the PRA, the Staff agreed  
6 to consider the need for upgrading, et cetera. And I  
7 was wondering if this represents -- what is the Staff's  
8 current position with respect to the use of PRA?

9 MR. DENTON: You mean PRA in general?

10 COMMISSIONER AHEARNE: Well, here I am using  
11 this as an example. It seemed that at one stage we were  
12 saying that regardless of the PRA you must do something,  
13 and then it seems to say that however, because of the  
14 PRA we are going to reconsider our position. I find no  
15 problem with that. I was just wondering what is the  
16 message.

17 MR. DENTON: As I recall this issue, Mr.  
18 Michaelson produced a report that had calculated some  
19 probabilities for this event occurring and GE responded  
20 with some much lower numbers, and then we subsequently  
21 got into the fray and gave our view back to Mr.  
22 Michaelson on what we thought they were.

23 We do not have a probabilistic staff down here  
24 today to go into that, but it has been evolving over  
25 about a year and I think the position we have taken with

1 GE is that -- and what this paragraph was intended to  
2 imply -- was that because of the uncertainties in this  
3 area we have come to the conclusion that they should  
4 provide equipment qualification for equipment in that  
5 area.

6 I think overall we continue to think it is  
7 very low probability of the kind of event occurring that  
8 is possible in there, but it was not sufficiently low  
9 that we could say no equipment qualification for the  
10 equipment. But it is a generic issue for boiling water  
11 reactors and not specific to Susquehanna.

12 COMMISSIONER AHEARNE: I appreciate that, and  
13 I was more interested in whether this was an evolving  
14 indication or an evolving NRR position on whether or not  
15 licensees should attempt to use PRA to explain their  
16 positions.

17 MR. DENTON: I agree with the use of risk  
18 assessment as a tool. We do not always agree with each  
19 other, but I encourage the use of it.

20 COMMISSIONER AHEARNE: So you are saying the  
21 statement that regardless of the outcome of the PRA  
22 essential equipment, et cetera, the phrase "regardless  
23 of the outcome" is not necessarily an operable phrase.

24 MR. DENTON: I think that is just poorly  
25 written. The fact that we could not come to agreement

1 on the PRA is a better way of saying it.

2 MR. EISENHUT: I would think that is a better  
3 characterization.

4 CHAIRMAN PALLADINO: I had one other question,  
5 Harold. On page 9-1 of the SER it discusses fire  
6 protection systems, discusses fire resistance rating of  
7 the cable wrap and then says "Licensee has committed to  
8 provide the cable wrap previously approved and install  
9 it in a manner recently tested."

10 Is that being done before full power?

11 MR. PERTS: The installation of the cable wrap  
12 has been completed that was specified.

13 COMMISSIONER GILINSKY: You say corrected?

14 MR. PERTS: It is completed. They installed  
15 cable wrap on trays that were located in, I believe it  
16 was, the remote shutdown panel room.

17 COMMISSIONER GILINSKY: I thought the wrap had  
18 been installed improperly.

19 CHAIRMAN PALLADINO: Or the wrong wrap.

20 COMMISSIONER GILINSKY: The same wrap.

21 MR. PERTS: There was wrap in the shutdown  
22 room, but the test that was used or provided to us as to  
23 accept it was unacceptable for cable trays that did not  
24 have the outer fiberglass coating. The wrap that was  
25 installed in the remote shutdown room did not have that



1 outer fiberglass coating.

2 We required then that they add that outer  
3 fiberglass coating. With the outer fiberglass coating,  
4 it is acceptable as a 1-R barrier and that installation  
5 has been completed.

6 CHAIRMAN PALLADINO: And I gather that was the  
7 material originally tested.

8 MR. PERTS: That is correct.

9 CHAIRMAN PALLADINO: You regard that problem  
10 as resolved?

11 MR. PERTS: Yes, I do.

12 CHAIRMAN PALLADINO: Are there other  
13 questions?

14 COMMISSIONER ROBERTS: The last time you  
15 talked about this nearby gas line. I assume all that  
16 has been -- you have got some administrative fix on  
17 that.

18 MR. NOVAK: Yes, sir, and our discussions are  
19 continuing. The Licensee is involved in a contract  
20 negotiation with the owner of the gas line. There is an  
21 area yet that we continue to work on, and that is that  
22 the owner of the gas line feels that under certain  
23 emergency conditions -- that is, if there were to be a  
24 break in the line somewhere else -- he is required to  
25 increase the flow rate through that line, potentially

1 above the value that we have evaluated.

2 Now he must do that for safety reasons, and  
3 the discussions that we are having right now are to  
4 develop adequate compensatory measures -- that is, a  
5 surveillance of the gas line in the proximity of the  
6 plant, monitors perhaps, but something that would be  
7 done in the event of an unusual event such as a pipe  
8 break somewhere else in that pipe system.

9 COMMISSIONER AHEARNE: But in the absence of  
10 that, has he agreed to the 39?

11 MR. NOVAK: Yes, he has. There will be  
12 modifications to the system to make it passively limited  
13 to 39.

14 Now just to correct -- if it were the same  
15 emergency situation, he would actually have to make a  
16 physical modification to that line to increase the  
17 flow.

18 COMMISSIONER GILINSKY: What is the concern  
19 about the line -- that the line itself might explode or  
20 that you would have a release of gas?

21 MR. NOVAK: That the line could explode and  
22 that an explosive mixture could find its way to the  
23 plant.

24 MR. DENTON: I think we are not worried about  
25 the explosion of the pipe affecting the plant but it is

1 the cloud that would drift over.

2 COMMISSIONER GILINSKY: The release of the  
3 gas.

4 MR. NOVAK: A burnable mixture could find its  
5 way to the plant.

6 COMMISSIONER GILINSKY: How close?

7 MR. NOVAK: At the closest point it is 1,500  
8 feet.

9 COMMISSIONER AHEARNE: I had some questions on  
10 the thing itself.

11 CHAIRMAN PALLADINO: Are you through with your  
12 presentation?

13 MR. NOVAK: Yes.

14 MR. DENTON: Actually there is one area that  
15 we wanted to call to your attention in view of some of  
16 the discussions in the past few days in Pennsylvania.

17 In the license itself on page three we had  
18 required that adequate supplies of potassium iodide for  
19 outside emergency workers be obtained by the State of  
20 Pennsylvania to meet their state plan or a contingency  
21 plan be developed. That requirement came directly from  
22 a FEMA finding and I think it is related to the fact  
23 that the State, in FEMA's view, does not meet its  
24 present plan, they either comply with the plan or change  
25 their plan.

1           We are attempting to ascertain is that still  
2 FEMA's position today, but I did want to flag it since  
3 it does deal with some of the same issues that we were  
4 confronted with with TMI. As far as we have been able  
5 to determine, it is FEMA's position the state does not  
6 meet its plan in this area.

7           CHAIRMAN PALLADINO: And you are giving them  
8 until March 1 to do that?

9           MR. DENTON: Yes, and all three of these  
10 conditions were lifted from FEMA's letter.

11           COMMISSIONER GILINSKY: What about other  
12 aspects of emergency planning? Have you got anything to  
13 say on that subject? Where do they stand with respect  
14 to exercises?

15           MR. DENTON: I do not know if we have anyone  
16 who can address that this morning.

17           COMMISSIONER GILINSKY: Will there be a  
18 full-scale exercise at this plant?

19           MR. RHODES: I am Gary Rhodes, Senior Resident  
20 up there. They had a full-scale exercise last March  
21 which we, of course, observed and FEMA also observed,  
22 and the results were that we found it adequate and  
23 acceptable.

24           COMMISSIONER GILINSKY: This involved the  
25 state and a range of participants?

1 MR. RHODES: This involved the state, right.

2 CHAIRMAN PALLADINO: Did you have a  
3 follow-up?

4 COMMISSIONER AHEARNE: It is more back to the  
5 point that Harold raised on the potassium iodide. I  
6 noticed in SER Number 4 on page 13-1, section 1, it  
7 says: "The State is committed to develop procedures and  
8 provide procedures to FEMA by October 1, 1982." Was  
9 that done?

10 MR. EISENHUT: I do not think it did and, in  
11 fact, there was another letter from FEMA on October 4  
12 where they reiterated that while things were proceeding  
13 quite well they still recommended the conditions that  
14 were in their August 30 letter, which includes potassium  
15 iodide be imposed for completion of the outside  
16 emergency preparedness items within this given time  
17 period.

18 COMMISSIONER AHEARNE: So the state did not  
19 meet its commitment.

20 MR. EISENHUT: That is right. Based on this  
21 information, it appears the October 1 date was not met.

22 COMMISSIONER GILINSKY: Can I return to the  
23 emergency planning point? On page 13-2, point 4 says  
24 the adequacy of the public notification system must be  
25 verified, as called for in FEMA-NRC joint criterion and

1 so on. What is that referring to?

2 MR. RHODES: That is also being completed.  
3 The interim agreement basically set out certain criteria  
4 that they had to go out and do testing of the full  
5 emergency notification system. I forget right now  
6 exactly when that was done.

7 COMMISSIONER GILINSKY: But it has been done?

8 MR. RHODES: But it has been done and we  
9 observed that.

10 COMMISSIONER AHEARNE: Before you sit down,  
11 following up on item 4 I just read down a little farther  
12 on page 13-2. It says that is a generic item which will  
13 be completed following the development of criteria and  
14 an implementation schedule by FEMA. So I gather that  
15 not only have they done whatever the test was but since  
16 November '82 when this thing came out they have also  
17 developed criteria?

18 MR. RHODES: Let me go back. There was an  
19 interim criteria that was written up. They tested to  
20 that interim criteria. I am not aware personally that  
21 the full-scale criteria has been --

22 COMMISSIONER AHEARNE: But as I read this  
23 section, number 4 refers to the full-scale criteria.

24 MR. RHODES: I do not have that in front of  
25 me.

1           COMMISSIONER AHLARNE: Well, it says, number  
2 4, "The adequacy of the public alerting and notification  
3 system much be verified as called for in the FEMA-NRC  
4 joint criteria, as stated in NUREG-0654," et cetera.  
5 And then down at the bottom of the section it says:  
6 "Item 4 is a generic item which will be completed  
7 following the development of criteria and an  
8 implementation schedule by FEMA."

9           MR. RHODES: What we observed and what they  
10 tested to was an interim criteria. Again, I do not have  
11 the SER in front of me right now so there may be further  
12 testing the Staff has requested be done.

13           MR. DENTON: The Staff in charge of this area  
14 did not think there were any unresolved issues in this  
15 area.

16           MR. STARSTECKY: You are correct. FEMA has  
17 not yet published the final criteria to where they test  
18 the sirens and the other off-site devices, so it is like  
19 any other operating plant. It is what do you do in the  
20 interim and we are waiting on all of these plants for  
21 the final criteria.

22           COMMISSIONER AHEARNE: On the same page, the  
23 State has committed to revise the State Radiological  
24 Emergency Plans by October 31, 1982. Have they done  
25 that?

1           MR. DENTON: I do not know if the Staff would  
2 know. Perhaps we could ask the Licensee.

3           COMMISSIONER AHEARNE: This is to reflect the  
4 elimination of the field of forward EOC concept.

5           MR. BARBER: I am Bill Barber, PP&L  
6 Licensing.

7           It is my understanding that activity has been  
8 complete, although I cannot tell you when it was  
9 completed.

10          COMMISSIONER GILINSKY: Are there any plans  
11 for another exercise in 1983?

12          MR. BARBER: Yes.

13          COMMISSIONER GILINSKY: A full-scale  
14 exercise?

15          MR. BARBER: I am not sure it meets the  
16 full-scale definitions, but there is an exercise  
17 scheduled for March 1983 that will involve at least a  
18 portion of the state organization and will involve the  
19 local organizations.

20          COMMISSIONER GILINSKY: Because a number of  
21 things seem to have been done in the past year that  
22 would be useful to test full scale.

23          MR. STARSTECKY: We are right now in the  
24 process of developing a schedule, the exercise schedule,  
25 for all of the plants next year and whether Susquehanna



1 gets the full-scale with FEMA observing and full state  
2 participation is still open because a state like  
3 Pennsylvania does not want to marshall its resources for  
4 all of the plans, so we are working that out with them  
5 now.

6 COMMISSIONER GILINSKY: But this is one that  
7 is starting up and it sounds to me as if it would be  
8 useful to apply that here.

9 MR. STARSTECKY: The Licensee will be required  
10 to have his full-scale exercise and the local  
11 communities in the area will also. Now as to the degree  
12 to which we can get the state to participate, I cannot  
13 answer that right now because that depends on what other  
14 exercises they have to participate in.

15 CHAIRMAN PALLADINO: Is there a question about  
16 dosimetry for emergency workers on this plant as was  
17 discussed in TMI?

18 MR. DENTON: I do not know what the situation  
19 is here.

20 COMMISSIONER AHEARNE: I thought the Licensee  
21 was paying for the dosimetry.

22 CHAIRMAN PALLADINO: There is no issue on the  
23 dosimetry question as to whether or not they are going  
24 to use TLDs or any other kind?

25 MR. DENTON: I know the issue, but I do not

1 know the answer.

2           COMMISSIONER AHEARNE: The answer is the  
3 Licensee has agreed.

4           COMMISSIONER ASSELSTINE: There were some nods  
5 out there.

6           MR. DENTON: Why don't we have a Licensee  
7 spokesman?

8           MR. BARBER: There had been a dosimetry  
9 question raised, but the issue is resolved at this  
10 point. The question involved self-reading dosimeters,  
11 both the type and the number. The question on TLDs was  
12 not an issue on Susquehanna. There are adequate numbers  
13 of dosimeters being provided and at some point in time  
14 the type of self-reading dosimetry will be as  
15 recommended and as specified in the state plan.

16           CHAIRMAN PALLADINO: I see, but there is no  
17 issue with regard to TLDs, the use of TLDs.

18           MR. DENTON: Let me make sure I understand  
19 it. Does that mean that you are going to provide the  
20 state people with two self-reading pocket dosimeters of  
21 different ranges and one TLD for permanent record?

22           MR. BARBER: That is what is going to be  
23 provided by the state.

24           CHAIRMAN PALLADINO: What was that?

25           MR. DENTON: I was just trying to clarify for

1 my understanding what he said. In addition to the  
2 self-reading pocket dosimeters, TLDs would be provided  
3 for permanent record of exposure and I think you said  
4 yes.

5 CHAIRMAN PALLADINO: I thought he said no.

6 MR. BARBER: I said TLDs was not a question in  
7 the review on Susquehanna.

8 CHAIRMAN PALLADINO: Why, because you are  
9 going to provide them?

10 MR. BARBER: Yes.

11 CHAIRMAN PALLADINO: Okay, thank you.

12 Are there any other questions?

13 COMMISSIONER GILINSKY: I have got a small  
14 point. I understand there is an amendment here that  
15 involves pre-service inspection of piping which is  
16 impractical to do as a result of something the Licensee  
17 did, which we asked them to do in, I guess, NUREG-0313.  
18 Did we realize those requirements would affect the  
19 pre-service inspection?

20 MR. DENTON: Which part of the SER?

21 MR. NOVAK: What that refers to, of course, is  
22 the Licensee asked for some relief on its pre-service  
23 inspection program. He effectively committed to a  
24 program he finds now unachievable, in his view.

25 COMMISSIONER GILINSKY: It is required by the

1 ASME code, is it not?

2 MR. NOVAK: Yes.

3 COMMISSIONER GILINSKY: Which cannot be done  
4 because of corrosion-resistant cladding required by one  
5 of our requirements, as I understand it, and I just  
6 wondered whether we had foreseen this difficulty or  
7 not.

8 MR. RHODES: Maybe I can help a little bit.  
9 The cladding is part of the problem. Another problem is  
10 there is actually a double weld involved in this area.  
11 They had installed this piping at one time, cut it out  
12 to make the modifications to take care of the stress  
13 problem, to put the cladded piping in there. And  
14 basically they have one weld right on top of another  
15 weld.

16 The double weld configuration, along with the  
17 cladding on the inside, along with a bevel arrangement  
18 on one end of the double weld arrangement, makes it very  
19 difficult for them to look at this one particular weld.  
20 Because they have a double weld configuration here does  
21 not necessarily mean they would have that same type of  
22 configuration in most other plants.

23 Most plants that would be built at this time  
24 where the piping was not already installed they would  
25 not have this same type of problem.

1           COMMISSIONER AHEARNE: So you are saying that  
2 in the SER, where it refers to the impractical ASME code  
3 examination, you do not feel that is a generic problem?

4           MR. RHODES: I do not feel that is a generic  
5 problem. I feel that it is a problem just for  
6 Susquehanna.

7           COMMISSIONER AHEARNE: Is that NRR's position?

8           MR. DENTON: Let me ask the Division of  
9 Engineering. My knowledge of the situation is they did  
10 have to make this field repair and it did result in this  
11 very unusual weld configuration that is atypical of  
12 boilers.

13           COMMISSIONER AHEARNE: The question, Dick, was  
14 in your SER you referred to an impractical ASME  
15 code-required examinations, and I wondered whether that  
16 was a generic problem or is it because of this specific  
17 Susquehanna.

18           MR. VOLLMER: I do not believe it is generic.  
19 I can look into that and let the Commission know.

20           COMMISSIONER AHEARNE: Because if it is a  
21 generic problem, we have to address it.

22           MR. VOLLMER: We would have go back and do  
23 something about broader aspects, yes.

24           CHAIRMAN PALLADINO: Okay. Are there other  
25 questions?

1 John?

2 COMMISSIONER AHEARNE: Working through the  
3 SER, Number 4 -- these are just minor questions -- page  
4 3-3. "392 dynamic test analysis of systems," et cetera,  
5 you say as a result of the independent design  
6 verification program it has become apparent to the Staff  
7 that the feedwater check valve might not have been  
8 adequately designed.

9 Was that solely because of the Teledyne  
10 independent program that you drew that conclusion?

11 MR. NOVAK: Let me first answer the question  
12 as I know. I think it was through the Teledyne review  
13 that brought it back to our attention. In other words,  
14 in our original review of the FSAR we believed those  
15 valves are qualified for dynamic loads.

16 As part of the Teledyne review which they  
17 specifically did not address, it caused us in our  
18 conversations to go back and question the Licensee.

19 COMMISSIONER AHEARNE: I was having difficulty  
20 drawing that from the Teledyne report.

21 MR. NOVAK: Yes.

22 COMMISSIONER AHEARNE: Page 3-4, under 32 to  
23 32-21, equipment considered conditionally acceptable,  
24 paragraph 3, you say it is the Staff's understanding  
25 that the Licensee had reviewed this report and that no

1 major concern was raised.

2 I guess again as a general question I really  
3 do not think that is a good way for the Staff to reach a  
4 conclusion.

5 MR. VOLLMER: You are absolutely right.

6 CHAIRMAN PALLADINO: Have you confirmed that  
7 understanding?

8 COMMISSIONER AHEARNE: Can I assume that you  
9 have done more than understood that the Licensee  
10 reviewed it?

11 MR. EISENHUT: Yes, you can, and we will fix  
12 that.

13 COMMISSIONER AHEARNE: Thank you.

14 On page 3-6, this may be more just a general  
15 question of the approach in SERs and I am not an avid  
16 reader of SERs, so I cannot really remark. But I notice  
17 on number 5 your total summary is the Staff has read the  
18 submittal and concluded -- has reviewed the submittal  
19 and concluded it acceptable.

20 And then, number 6, you had the Staff has  
21 reviewed the submittal and concluded the device is not  
22 acceptable for interim operation.

23 I would have thought that you might have a few  
24 more words in there explaining that.

25 MR. DENTON: We are always working to improve

1 the quality of SERs because they come from perhaps  
2 twenty different reviewers at varying grade levels and  
3 we are always trying to improve the documentation and  
4 the findings, and I think we put a lot more into them  
5 now than we did a couple of years ago but try to stay  
6 within the resource constraints at the same time.

7           COMMISSIONER AHEARNE: I understand that, but  
8 just when I read the sentence, you reviewed and you  
9 concluded it need not be fully qualified for interim  
10 operation. It would probably be useful to have at least  
11 a sentence going on.

12           MR. DENTON: That is a rather bald statement  
13 and it is not supported, that is right.

14           COMMISSIONER AHEARNE: On page 17-2 --

15           MR. DENTON: I guess I should mention that the  
16 ACRS occasionally asks that we provide a summary of the  
17 SER and give less information.

18           COMMISSIONER AHEARNE: I understand.

19           Down, I guess it is, oh, the fourth paragraph,  
20 the one after the final report was issued, you say as a  
21 result of the meeting the Staff held, although no  
22 deficiencies affecting the plant safety resulted,  
23 further action by the Licensee will be required, and I  
24 guess -- is what you are really saying there is that you  
25 saw no immediate safety problems but there were the



1 indications that they had to do a more extensive review,  
2 the point you were talking about earlier

3 MR. NOVAK: Yes.

4 COMMISSIONER AHEARNE: Then, my last question  
5 is with respect to the license. On the first page,  
6 number 2, section 1, under Maximum Power Level, you say  
7 this is now the amendment which I gather is to go to  
8 full power and you have, under Maximum Power Level, the  
9 pre-operational test, startup tests and other items  
10 identified in Attachment 1 to this license shall be  
11 completed as specified. Attachment 1 hereby  
12 incorporated.

13 I gather this the Attachment 1 that was  
14 referred to previously because there is no Attachment 1  
15 to this, and the previous Attachment 1 ended at five  
16 percent.

17 MR. PERTS: That is correct. It is the  
18 Attachment 1 in the original license.

19 COMMISSIONER AHEARNE: So what it is really  
20 saying is everything that had to be done before you go  
21 to five percent has to be done before you go to full  
22 power?

23 MR. PERTS: Yes.

24 COMMISSIONER AHEARNE: I would assume that  
25 everything that had to be done --

1 MR. RHODES: There was one item in that  
2 attachment that had to be done prior to going above five  
3 percent, and that is ESW water hammer.

4 COMMISSIONER AHEARNE: Before going above?

5 MR. RHODES: Before going above five percent.

6 COMMISSIONER AHEARNE: Right, and so I would  
7 assume for an amendment that is going to allow them to  
8 go above five percent they would had to have completed  
9 everything.

10 MR. RHODES: All the items under Attachment 1  
11 have been completed.

12 CHAIRMAN PALLADINO: Other questions?

13 COMMISSIONER GILINSKY: I wonder if Mr. Zerbe  
14 has anything to add to our conversation.

15 COMMISSIONER ASSELSTINE: I have two questions  
16 on the TMI action plan requirements. Beginning on page  
17 22-1 you have a discussion of containment bridge valves  
18 and your discussion indicates that the test program that  
19 was done is based upon a five-inch model valve and then  
20 you describe on page 22-1 the size of the valves in the  
21 plant.

22 Is that essentially an extrapolation from the  
23 test results up to the larger size valves and, if so, is  
24 it likely that that is going to be an accurate predictor  
25 of performance of the valves?

1 MR. DENTON: I will see if we have someone who  
2 can answer that.

3 COMMISSIONER ASSELSTINE: And while you are  
4 looking at that, I notice you found a number of  
5 deficiencies in the analysis that have been done and,  
6 therefore, you have imposed restrictions on the  
7 operability of those valves until Licensee submits an  
8 acceptable operability analysis.

9 I guess what I was wondering is if there are  
10 going to be additional tests involved in that analysis  
11 or is it just a further analysis of the five-inch valve  
12 test?

13 MR. NOVAK: Let me at least try to answer the  
14 question. In these valves there is a certain  
15 understanding that unless the valve is opened beyond a  
16 certain value we have high confidence that the valve  
17 should close. The loads resulting from accidents should  
18 not preclude the valve closing.

19 So there is an ongoing verification program of  
20 valves. I cannot be more specific than that, except  
21 that we have confidence that as long as we limit the  
22 valves to a certain opening position, based on the data  
23 and the information we have in the analysis of that  
24 valve, we are confident that the valve should close.

25 Now there are ongoing tests to verify this.

1           MR. VOLLMER: To further answer that,  
 2 basically it is almost -- it is very difficult, if not  
 3 impossible, with current test setups to test full-size  
 4 valves because you are talking about an enormous volume  
 5 at pressure behind them. And so the deficiencies that  
 6 we find in these valves are normally of stresses on  
 7 certain points in the valves -- the mechanism, the arm  
 8 mechanism and so on -- that we really believe are  
 9 amendable to calculations and to extrapolation between  
 10 one valve size and another.

11           So I would guess that or I would think in this  
 12 particular instance there would be a calculation  
 13 analysis of the valve rather than the testing that would  
 14 give us the final results.

15           COMMISSIONER ASSELSTINE: So in any event the  
 16 restrictions on the operations of the valves would  
 17 remain in effect until you get both test results and an  
 18 analysis that you can accurately predict the operation.

19           MR. VOLLMER: Until we have enough analysis  
 20 that we had confidence that they could close the dynamic  
 21 ports.

22           CHAIRMAN PALLADINO: You said both. Would it  
 23 be both, or is it either?

24           MR. VOLLMER: Well, one other problem in this  
 25 area, it is very sensitive to the actual setup. In

1 other words, if you have a pipe before the valve that  
2 has a long, straight run, you have a linear flow. If  
3 you have an elbow before it, you have a different  
4 situation, so you have to look carefully at the actual  
5 situation leading up to the valve, and these things you  
6 could hardly test all parameters.

7           MR. DENTON: I should mention that in a number  
8 of these valves which fail to pass all the tests, we  
9 have required that they be closed whenever the plant is  
10 in substantial operation, and this review was done at  
11 the Equipment Qualification Branch. It has gotten down  
12 to the kind of detail that Dick mentions where they have  
13 flow direction veins before the valves that are very  
14 important, so it has gotten to be a very detailed kind  
15 of review.

16           But I would be happy to provide you with a  
17 description of what the basis for our confidence is in  
18 scaling up from the five-inch to the 60-inch size.

19           COMMISSIONER ASSELSTINE: The second item was  
20 on item 2.F.1, Instrumentation for Detection of  
21 Inadequate Core Cooling. It was just unclear to me  
22 whether that second requirement had been satisfied yet,  
23 or whether that has to await analysis of the BWR Owners  
24 Group report. That is, by October 31, PP&L shall submit  
25 its proposal for item 2.F.1.

1           Have they submitted that or does that have to  
2 wait until after the analysis is done of the BWR group  
3 report?

4           MR. DENTON: I think Henry Speis.

5           MR. YOUNGBLOOD: I think if you look down to  
6 the next-to-the-last paragraph --

7           CHAIRMAN PALLADINO: Could you come to the  
8 mike, please, and identify --

9           MR. YOUNGBLOOD: Joe Youngblood, Chief,  
10 Licensing Branch.

11           If you look at the next-to-the-last paragraph,  
12 it was picked up there. That submittal would be made by  
13 the BWR Owners Group until December, and the correction  
14 was made up above.

15           MR. DENTON: I think Mr. Youngblood said we  
16 are awaiting the BWR Owners Group as a foundation for  
17 specific action.

18           COMMISSIONER ASSELSTINE: So until we get  
19 that, we will not get a submittal from the Licensee.

20           MR. YOUNGBLOOD: Right.

21           CHAIRMAN PALLADINO: I think you wanted OPE to  
22 make a comment.

23           MR. ZERBE: I did not have any comments to  
24 make.

25           COMMISSIONER GILINSKY: I have a comment to

1 make, if it is appropriate.

2 CHAIRMAN PALLADINO: Okay.

3 COMMISSIONER GILINSKY: One is about the plant  
4 and the other is a more general one.

5 I visited the plant not too long ago and came  
6 away thinking well of the company and their approach  
7 toward the plant and their operation, and I hope they  
8 will keep it up.

9 A more general one is I think in meetings of  
10 this sort I think it would be helpful to have the  
11 company appear at the table. I think we can discuss  
12 some of these more detailed matters more directly and  
13 also get the company's view on some of the larger  
14 questions. I think it would add to our meetings.

15 CHAIRMAN PALLADINO: We will take that under  
16 consideration.

17 Well, let me ask the Commissioners if they are  
18 ready to vote on the question of approving the issuance  
19 of a full power license. Let me ask the question.

20 Do the Commissioners agree to approve the  
21 issuance of a full power license amendment for  
22 Susquehanna Unit 1 Nuclear Plant? All those in favor,  
23 indicate by saying aye.

24 (A chorus of ayes.)

25 CHAIRMAN PALLADINO: Opposed?

1 (No response.)

2 CHAIRMAN PALLADINO: All right, so ordered.

3 We have concluded our purpose here for the  
4 moment.

5 (Whereupon, at 11:07 o'clock a.m., the meeting  
6 adjourned.)

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the  
NUCLEAR REGULATORY COMMISSION

in the matter of: DISCUSSION OF AND VOTE ON FULL POWER OPERATING  
LICENSE FOR SUSQUEHANNA

Date of Proceeding: November 12, 1982

Docket Number: \_\_\_\_\_

Place of Proceeding: Washington, D.C.

were held as herein appears, and that this is the original transcript  
thereof for the file of the Commission.

ALFRED H. WARD

Official Reporter (Typed)



Official Reporter (Signature)