ORIGINAL

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the matter of:

COMMISSION MEETING

(Public Meeting)

DISCUSSION/POSSIBLE VOTE ON FULL POWER OPERATING LICENSE FOR LIMERICK

Docket No.

Location: Washington, D.C.
Date: August 8, 1985

Pages: 1 - 95

ANN RILEY & ASSOCIATES
Court Reporters
1625 I St., N.W.
Suite 921
Washington, D.C. 20006
(202) 293-3950

50-353

D I S C L A I M E R

This is an unofficial transcript of a meeting of the United States Nuclear Regulatory Commission held on August 8, 1985 in the Commission's office at 1717 H Street, N.W., Washington, D.C. The meeting was open to public attendance and observation. This transcript has not been reviewed, corrected, or edited, and it may contain inaccuracies.

The transcript is intended solely for general informational purposes. As provided by 10 CFR 9.103, it is not part of the formal or informal record of decision of the matters discussed. Expressions of opinion in this transcript do not necessarily reflect final determination or beliefs. No pleading or other paper may be filed with the Commission in any proceeding as the result of or addressed to any statement or argument contained herein, except as the Commission may authorize.

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

Discussion/Possible Vote on Full
Power Operating License for
Limerick

- - - - - -

PUBLIC MEETING

- - - - - -

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

Thursday, August 8,1985

The Commission met in public session at 10:35 a.m., pursuant to notice, Commissioner Thomas Roberts presiding.

NRC COMMISSIONERS PRESENT:

Thomas Roberts, Commissioner
James Asselstine, Commissioner
Frederick Bernthal, Commissioner
Lando Zech, Commissioner

STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

H. Plaine, OGC

S. Chilk, SECY

E. Christenbury

R. Martin

D. Eisenhut

J. Roe

T. Murley

R. Starostecki

L. Ralph

V. Boyer, PECo

J. Everett, PECo

G. Leitch, PECo

P. Zitzer, LEA

AUDIENCE SPEAKERS:

D. Matthews

Mr. Collins

T. Martin

W. Russell

R. Bernero

A. Thadani

R. Wilkerson

P R O C E E D I N G S

COMMISSIONER ROBERTS: Good morning, ladies and gentlemen.

Chairman Palladino is on travel overseas, and I will act as Acting Chairman.

The purpose of today's meeting is to discuss and decide whether to authorize the Director of Nuclear Reactor Regulation to issue a full power license for the Limerick Nuclear Power Plant Unit 1.

The merits review has been completed for the Licensing Board's First Partial Initial Decision, and the Commission's order, CLI-85-13 of July 24th, 1985, allowed the Licensing Board's Second and Third Partial Initial Decisions to become effective.

Therefore, at this meeting we need only to determine whether to allow the Licensing Board's Fourth Partial Initial Decision to become effective.

The Fourth Partial Initial Decision addresses hearing issues related to emergency planning for the State Correctional Institution at Graterford.

On October 26th, 1984 the NRC authorized a low power license for the Limerick Power Plant, authorizing fuel load, pre-criticality testing and low power operation for power levels up to 5 percent of full power.

The NRC Staff has prepared a presentation, and I

understand that members of the NRC Staff, as well as representatives of the Philadelphia Electric Company, are available to answer any questions we might have.

I also understand that Mrs. Phyllis Zitzer, representing Limerick Ecology Action, LEA, has requested an opportunity to speak at this meeting. After the Staff completes its presentation, the Commission will grant her five minutes to make her comments. After Mrs. Zitzer speaks, we will allow the Applicant five minutes for any comment it wishes to make.

At the conclusion of the meeting I intend to ask for a vote on whether to issue an order authorizing the Licensing Board's Fourth Partial Initial Decision to become effective, thus authorizing the Staff to issue a full power license for Limerick, Unit 1.

Would any of the other Commissioners like to offer comments at this time?

COMMISSIONER ASSELSTINE: No.

COMMISSIONER BERNTHAL: No.

COMMISSIONER ROBERTS: I will now turn the meeting over to Mr. Roe.

MR. ROE: I will ask Mr. Eisenhut to proceed with the Staff's briefing.

MR. EISENHUT: Thank you.

As Commissioner Roberts said, the low power license

was issued in October --

COMMISSIONER ROBERTS: I am not going to do my Alexander Haig act.

[Laughter.]

MR. EISENHUT: I thought of that.

[Laughter.]

The plant has completed its 5 percent power testing phase. This is one of the few plants that's listed as an impacted plant in the Bevill schedule, it has bewen for several months. I believe they would have been able to proceed in something like March of this year, had there been no other constraints.

We are going to go through today a summary briefing, trying to hit the highlights of the review that's been going on now for a number of years.

One item I will highlight is that yesterday we sent down a memo pointing out an issue concerning a potential error in a Chapter 15 analysis, more error in the sense of an input omission. We sent that down to you yesterday. We will be discussing that briefly today. That issue, however, is resolved.

The people here with us today that will be going through the briefing from the Region, of course Tom Murley, the regional administrator and his division director, Rich Starostecki are with us. Tom Murley will go through those

portions relating to the completion of the 5 percent and operations phase.

Tom Novak, on my left, the Assistant Director for Licensing, and with him is Bob Martin, who is the Project Manager, they will be going through the principal part of the briefing.

With that, Tom, why don't you proceed.

MR. NOVAK: May I have the first slide.

[Slide.]

Now may we move to the next one, please.

[Slide.]

Very briefly, I will cover some selected issues that occurred during the license process, and Dr. Murley will discuss construction, his perspective on low power operations, and we will summarize with any comments regarding investigations and any outstanding 2206 petitions.

May I have the next slide, please.

[Slide.]

As the Commission is aware, Philadelphia Electric Company is the owner and operator of the Limerick Station. They also operate the Peach Bottom Station, and have for over 10 years. Peach Bottom 2 and 3 were licensed for operation in 1973 and 1974 respectively.

In many ways, Limerick resembles Peach Bottom. It is a boiling water reactor. There is a difference in the

containment design, but more importantly, I think Philadelphia Electric used the same team. The architect-engineer both at the Peach Bottom stations and at Limerick was Bechtel. So they designed and constructed both stations.

As the Commission knows, the Limerick station is located in what we consider to be an above-average site population area.

May I have the next slide, please.

[Slide.]

With regard to the FSAR review, I would like to touch on a few issues that the Commission has shown interest in.

Initially the fire protection issue, I think here we can say that the design and the implementation of the fire protection at Limerick is very good. The plan was approved back in August of 1984. There was an in-depth region inspection at that time and there were no equipment violations identified.

As part of the review, there were seven deviations approved by the Staff to our review plan in Appendix R. I would consider this to be a low number on the average. So it went pretty much along the guidelines we had been looking for. It was implemented and there were no violations in terms of equipment deficiencies.

With regard to environmental qualifications, again

the Licensee was able to provide all equipment and documentation necessary to meet our requirements prior to issuance of the OL license.

So as far as environmental qualification, he's there and he continues to be there now.

We do plan to schedule an inspection. The region will talk about this briefly, but there were earlier inspections as part of the licensing review, and we are satisfied with the equipment that he has placed in the station and its qualifications.

With regard to low level waste storage, the current storage capacity at Limerick is a two-month storage. They do have a contract with Barnwell, and I'm sure they will be following this issue closely as it develops.

With regard to staffing, because of the Peach Bottom experience they do come in with an experienced crew. They will be operating a six-shift rotation, and at the present time they will only require what we refer to as one shift adviser. That person will be a Philadelphia Electric Company employee. He has previous experience at Peach Bottom, and so we are satisfied that they are coming in with an experienced crew, and they do have a substantial number of senior reactor operators as well as reactor operators.

COMMISSIONER ASSELSTINE: Tom, on low level waste storage, do they have any plans for expansion at this time?

MR. NOVAK: I don't know specifically. I do know that they are looking at compaction and other things that they can do on site.

COMMISSIONER ASSELSTINE: Okay. But you don't know specifically about plans for expanding beyond two months' onsite storage capacity?

MR. NOVAK: That's right, I don't.

COMMISSIONER ROBERTS: How does the two months compare with other plants?

MR. NOVAK: We've seen them as low as one month, and of course some of the more recent designs have five years.

COMMISSIONER ASSELSTINE: A lot of plants seem to be at least beginning to plant for extended storage onsite. So they've got the facility in place, yet they can plan for it.

MR. NOVAK: With regard to technical specifications, I think here is a place again where experience does pay off. The Philadelphia Electric people did use experienced personnel in the development of their tech specs, they relied on their experience that they had with Peach Bottom.

Again, it is a standard design, so a lot of the Staff's review could be put right back into the system. The tech specs that we reviewed on Susquehanna, for example, are very similar to what was adopted for Limerick.

This plant has been in operation for eight or nine months. There has been no requirement to change any technical

specification.

As in any case, there are some enhancements that they do see, and we do expect to approve them if the Commission votes to authorize full power. This is just a fine-tuning that I would refer to it as.

With regard to the issue that Darrell mentioned earlier on a difference identified in the Chapter 15 analysis, I would just like to sort of give you a little background on this.

The region identified a difference between the performance of the plant in the event of a loss of offsite power from a low power versus what was in the technical specifications.

The Applicant went back and confirmed in fact that the Chapter 15 analysis did not specifically recognize some design changes that were made to the plant back in 1973 and 1974.

We were concerned primarily with the fact that whether under certification that the plant is designed in conformation with the FSAR, with the technical specifications. We discussed this at length with the Philadelphia Electric Company last Friday. They spent the weekend with General Electric and Bechtel going over it.

More importantly, they took their own station operators and went through the analysis to ensure to

themselves that the actual plant, to their satisfaction, meets the Chapter 15 analysis.

We are convinced that they did a good job. We are convinced that this was an isolated case, in reality not changing the analysis. So our conclusions regarding the analysis to us say that the plant does meet the Commission's regulations and that this change was actually missed several years ago and was not picked up. But on looking back, we are satisfied that the plant and the analysis are consistent.

MR. EISENHUT: Tom, just to make it clear. It was a question over what was in the FSAR, not in the tech specs. It really didn't affect the tech specs per se. The FSAR both had it right in the description of where they described the systems and how the plant functioned.

For example, this system as it was described I believe in Chapter 7 of the FSAR was correct. You really get to it by Chapter 15, which is the accident and transient analyses. They do a considerable amount of evaluation to conclude that they have identified the bounding analyses. They did define the bounding analyses. That really didn't change by this issue.

The issue was that the change of the system in Chapter 7 that occurred many years ago was not picked up and factored in as an input to the analysis in Chapter 15 as one of the calculations that you go through to verify.

As Tom said, since this issue came up last week, there's been quite extensive rework and analysis by both the utility, by Bechtel, by GE, and by the Staff looking at it, that we are confident that it was an isolated case that really didn't affect the issue that is in Chapter 15.

Chapter 15, which is the accident analysis, really doesn't describe all the inputs and bounding conditions, anyway. But we thought it was a pretty serious matter to the extent we asked them to go back and reverify to us that this was an isolated case. And that's basically where we came down.

COMMISSIONER ASSELSTINE: So even in the fairly short amount of time that you've had on this, you are satisfied that they have gone back and looked enough at other aspects of Chapter 7 as compared to Chapter 15 to assure that this is in fact an isolated instance, there aren't other instances in which the FSAR is internally inconsistent?

MR. EISENHUT: That's right. But not limiting it to Chapter 7, because the issue really isn't just a Chapter 7 issue.

COMMISSIONER ASSELSTINE: Yes.

MR. EISENHUT: It was -- generally the way the vendor does accident analysis, he uses pretty much standard assumptions. They do it for a topical method to the extent they can, and they change the input parameters as they are

unique to this facility.

The issue on the parameter that we are discussing here happens to be unique to Limerick and one other plant that is yet to be licensed. So all of the other standard plants, the calculation would have been right, all of the other BWRs, it would have been right.

So we really asked the question a little broader than Chapter 7. How do you know, assuming that Chapters 1 through 14, let's say, are correct and the description is right and we have no reason to question that -- those have been verified in a number of cases -- how do you know that all of the Chapter 15 analyses had the right physical descriptions of the systems as well as calculational inputs? And the only physical description problem we came up with was the one in question.

There were other changes where they were unique, it was verified to be correct in the analysis. So we looked at a little broader context than even Chapter 7.

COMMISSIONER ASSELSTINE: Okay.

COMMISSIONER ZECH: Could this specific issue apply to other plants throughout the country?

MR. EISENHUT: It is my understanding this specific issue only applies to the Clinton facility. Is that correct, Tom?

MR. NOVAK: That's correct.

MR. EISENHUT: And yet to be licensed. And, of course, we will be looking at that one also.

COMMISSIONER ZECH: All right.

COMMISSIONER ASSELSTINE: As a general matter, how do you go about assuring that the other chapters of the FSAR match the plant?

MR. EISENHUT: Would -- maybe the region would like to answer.

MR. MURLEY: As a matter of fact, our inspectors take the FSAR and they start with that, and then the tech specs and they walk down the plant. And we concentrate on the design chapters of the FSAR -- I guess it's 5, 6, 7, 8 and 9 and those chapters.

We in the region really don't get too much involved in the Chapter 15 accident analyses because they deal with typically bounding cases, and that is what happened here. Even though we found that there was a design difference, it didn't affect the bounding analysis.

So we tend not to focus too much on the Chapter 15. But we do verify that the design aspects are accurate.

COMMISSIONER ASSELSTINE: And since Chapter 7 is accurate, that's why the inspection program didn't pick this up earlier on.

MR. MURLEY: That's right.

MR. EISENHUT: Oh, but the inspection -- I think I

should also give credit --

COMMISSIONER ROBERTS: And it was found in the region.

MR. EISENHUT: It was found in the region by an inspector verifying a comparison between the simulator and the --

MR. MURLEY: That's an interesting thing I think is probably worth a second to explain how. They have a plant-specific simulator at Limerick, and they were doing some transients, training their operators, and our inspector was there watching them, and he found that the plant tripped on a particular transient, I guess in a couple seconds whereas the FSAR said it was supposed to be almost a minute, roughly. And so he asked what's the reason for all this. And that's how he found it.

I'm proud of him for picking that up, and I think this is an example where we can use the simulator and it's a better representation of the transients than the bounding calculations in Chapter 15 to look for these kinds of things.

So, Commissioner Zech, in answer to your generic question, even though only Clinton may be only affected by this particular change, there may be others, and I think we can use the simulator comparison to help us look for these kinds of things.

COMMISSIONER ZECH: Well, it certainly does give you

an excellent example of the value of the simulators.

MR. MURLEY: Absolutely.

COMMISSIONER ZECH: No question about it.

COMMISSIONER ASSELSTINE: Apart from the forunate instance in this case, where the inspector using the simulator was able to find it, have you thought about, particularly NRR, how you are going to go about making sure that this kind of thing doesn't crop up in other cases in terms of the relationship between the accident analysis and the balance of the FSAR?

MR. NOVAK: Well, let me speak to that. We do, a part of the review of the accident analysis, go back and confirm that the selected setpoints for reactor trip and so forth as described in other portions of the plant are proper, so there is that continuity.

This case is kind of unique in the fact that, one, when you do simulator runs, you try to represent the plant as you intend to operate it. Now they were intending to try to look at what is the response to the plant in the event of loss of offsite power or loss of station auxiliaries from 25 percent power.

The reason they were looking at this, again to the credit of the Licensee, a similar event had happened at the Susquehanna station and, in fact, resulted in a short, brief station blackout. And so they were concerned and wanted to

know how would their plant behave and how would they respond and restore it.

So they worked at it in getting the system simulator to a point where they could then take these transients and go back and look at them.

So you'll use the simulator as a learning tool and try to understand it.

As far as the FSAR is concerned, we do look at the bounding events. Now you will never be able to get into the lower layers of the more standard transients, because they are what we would call more like best estimate. The Chapter 15 analysis is intended to be a design analysis, a bounding analysis. But I do think in terms of the specific parameters, they are checked in terms of that.

COMMISSIONER ASSELSTINE: Are you saying that absent the kind of effort the Licensee put in, in terms of programming and using their simulator, and absent the kind of effort that our inspector put in in finding this, that we wouldn't have found it under our normal review?

MR. EISENHUT: I'm not sure we would. I don't think we look at that kind of detail on inputs as a general rule. That's not to say, though, that -- on the other hand, I think we do need to go back and take a look to see if there is some way we ought to be changing things.

We have been for a number of years highly

compartmentalized in the way we do the review. We do the technical detailed review in one system, and another system, when you get to the analysis people, they basically take the assumptions and inputs as givens. They don't go back and correlate "are those the right inputs from the systems people who did the systems review," and the systems people who review the thing don't necessarily go to the accident analysis.

So I think it is something that we want to look at as how they marry together. And I'm not sure, though, that we are, as Tom said, going to get back to that kind of level and depth. But a check -- I'd like to see a plant-specific simulator be used as a check to the system. In this case it weas fortunate, we do have a very good plant-specific simulator. We don't have that in most places around the country.

COMMISSIONER ASSELSTINE: I think it's worth looking at. I think what the Staff did in this case is very good, and what the Licensee did was very good. But the fact is we don't require simulators. Some plants don't have them. I mean it does look like this was a fairly good effort on the part of the licensee to use their simulator, and then a good effort by a perceptive inspector to spot this kind of thing. And I think it's worth taking a look at, maybe giving us a paper on if you don't have that, then what are the implications for our ability to spot these kinds of things; or conversely, is this

a reason why maybe we ought to take the step that we haven't taken so far and saying everybody has got to have a simulator, or with few exceptions. Maybe some of the smaller, older plants. I think it's worth looking at.

COMMISSIONER BERNTHAL: Yes, I have to say, we sit here month after month -- it's not quite year after year for me yet, I guess, but at least for two years -- and everybody says that we don't require having a simulator, but we all agree and everything we say indicates that everyone should have a simulator, and it kind of makes me wonder why we don't bite the bullet and address that issue one of these days.

COMMISSIONER ASSELSTINE: Yes. In fact, I agree with you, Fred. I'd sort of like to see a paper on that particular issue. Maybe we ought to do something about it.

MR. EISENHUT: Well, you certainly have to look at it in the broadest context, because we do not do a 100 percent review of FSAR detailed analyses by a figment of anyone's imagination. And we never will. We just do it as a spot-check.

MR. RUSSELL: I might just point out to the Commission as a part of the rulemaking --

COMMISSIONER ROBERTS: For the transcript. We all know you.

MR. RUSSELL: This is Bill Russell.

For the proposed rulemaking that's out now that's in

the comment period, we will be requiring the use of a simulator for examination of operators. That package is going through CRGR comment section this month, and we expect to have a package down to the Commission shortly.

MR. EISENHUT: Well, let's see, Bill, just to make sure, that is not requiring a plant-specific detailed --

MR. RUSSELL: No, it requires a simulation facility, but in fact all the facilities with the exception of about eight are going to an ANSI 3.5 replica simulator within about three years. So it's a small number and it is generally the smaller facilities that are going to go to a simulation facility where you'd use a walk-through plus a fundamental simulator.

COMMISSIONER ROBERTS: Let me suggest, this is an interesting subject, but I think we're straying from the subject in hand. We've spent almost 30 minutes and we're on page 4, so let's try to proceed.

[Laughter.]

COMMISSIONER ASSELSTINE: I do think --

COMMISSIONER ROBERTS: I agree, but for another time.

COMMISSIONER ASSELSTINE: Let's see a paper as a separate matter that addresses the question directly.

COMMISSIONER ROBERTS: Let's proceed with Limerick.

COMMISSIONER ZECH: I think that Darrell's

absolutely right, and I agree with Commissioner Asselstine's thought that we should learn from this lesson and perhaps your procedure should be reviewed, and I think that's what you're telling us, and I agree with that.

MR. NOVAK: The next topic was referred to as the severe accident risk assessment. That was the probabilistic risk assessment that the Licensee did and that was his title for the report. It was a full scope PRA. It looked at both internal and external events. I'd like to summarize just very briefly some of the things that we see of benefit to this work.

First of all, it really provided additional evidence that the design was sound. It gave you that confidence.

Second, there was clearly a benefit to the utility. It put him on a very steep learning curve about his plant. He was able then to better understand it and to do a number of things about it. As he went through this design and the PRA work, he could see where changes could be made into the plant design that would clearly improve the risk of operation; things that are not very major, but you could go back in and look at the ventilation system for a specific room and decide that it would be better to provide additional ventilation to that system.

You looked at valve performance and see where changes in valve performance could improve the operation of

that plant.

So we were very positive that this piece of work did really check out the plant, put the Licensee on a very good learning curve in understanding it, and reduced the risks of operation.

This PRA is going to continue. The Licensee is committed to maintain it. What he is doing now and will continue to do for the rest of the year is to update it to clearly reflect the latest configuration of the plant.

He will then put it into his training program, he will then put it into his maintenance program as appropriate. So we are very positive on this effort, and I think it is to his benefit.

With regard to emergency preparedness -- may I have the next slide, please.

[Slide.]

I think I can sum up this slide in a few sentences.

FEMA has provided a finding that offsite emergency planning and preparedness is adequate and can be implemented. Based on this finding and on the Staff's previous assessment of the adequacy of onsite planning and preparedness, the Staff concludes that the overall state of emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of an emergency at Limerick.

In three ASLB Partial Initial Decisions, the Board found in favor of the Applicant on all emergency planning issues. Two conditions concerning offsite traffic control and unmet municipal staffing needs were specified as requiring resolution prior to operation above 5 percent of rated power.

Based on the information provided by FEMA, the Staff has concluded that the two Board conditions have been satisfactorily resolved.

In the most recent Partial Initial Decision, issued on July 22 of this year, the Board found in favor of the Applicant with regard to contentions related to the adequacy of the emergency plan for the State Correctional Institute at Graterford.

In response to the Commission guidance related to Garde vs. NRC decision concerning offsite medical facilities, the Applicant has confirmed that the offsite emergency plans contain a list of medical service facilities. The existence of such a list in the offsite plans has also been confirmed by FEMA.

The Applicant has also committed to fully comply with the Commission's response to the court decision.

Lastly, the Applicant has submitted a request for an exemption from the regulatory requirement for the conduct of a full participation exercise within one year before licensing of full power operating license. One year ran out last

month. This request, which has been filed with the Commission, was referred to the Director of NRR by the Commission, and the NRC Staff has found that the granting of the requested exemption is appropriate.

I think that summarizes for us the emergency planning issues.

COMMISSIONER BERNTHAL: As a matter of curiosity, it's been some time -- I guess a year or so since I visited that plant -- but I seem to recall there was a major freeway about to go right in front of the plant site. And I wondered at the time whether that affects the entire emergency planning picture in any way. One would presume positively. But it wasn't finished at that time. Does anybody know about that?

MR. MURLEY: The freeway is finished, I can say that.

[Laughter.]

I don't know how it has affected the timing analysis. Perhaps someone from I&E -- I just don't know about the analysis. But it's bound to be better.

COMMISSIONER BERNTHAL: The analysis had to have been finished before that road was done, and you have now got four lanes of super highway that weren't there before. I'm curious whether that makes a difference.

MR. MATTHEWS: Just based on the available information that one of the Staff members informed me of, that

evacuation time estimate had been completed prior to the completion of that freeway. Therefore, you would only assume that the availability of it would probably reduce those times.

However, the issue of traffic control is something that was resolved with regard to plans for control of personnel leaving the EPZ is something that was just recently completed. So I would have expected those plans to have incorporated the existence of that freeway.

This was Dave Matthews of the NRC Staff.

MR. NOVAK: May I have the next slide, please.

[Slide.]

And turn it 90 degrees either way. Thank you.

COMMISSIONER ROBERTS: Not either way.

[Laughter.]

MR. MURLEY: Thank you.

We would like to spend a minute talking about the supplementary cooling water system. Before I ask Bob Martin, the project manager, to describe it, let me first say that none of this water is needed for any safety consideration at the plant. The plant does have a dedicated pond. We refer to it as the ultimate heat sink and it would provide necessary cooling for a 30-day period following any design basis accident.

The water we are going to talk about now is strictly for operation of the plant. It's what you put through the

condenser, and I would like Bob just briefly to walk you through the status of this design.

MR. ROBERT MARTIN: As Mr. Novak just mentioned, the supplementary cooling water system is a system for transferring water from the Delaware River over a linear distance of some 30 approximate miles to the Limerick plant near Pottstown.

The system is comprised of basically the Point Pleasant Pumping Station on the Delaware River with piping going up to Bradshaw Reservoir. This portion of the system is the portion which is the subject of the Neshaminy Water Resources Authority responsibility in Bucks County and the system is currently -- the status of construction is currently incomplete. And the further schedule on it is pending the progress of proceedings between these agencies and the Philadelphia Electric Company.

Once a decision has been reached on completing the construction, it's estimated it would take approximately nine months to physically complete the construction on it.

COMMISSIONER ASSELSTINE: Has construction started on that portion?

MR ROBERT MARTIN: Construction has been partially completed on it, yes. All of the work in the river has been completed, and some of the foundation work on the pumping station itself has been completed, and at that point it was

stopped some time ago.

The portion from the Bradshaw Reservoir and the transmission main is being constructed under the responsibility of the Philadelphia Electric Company, and at this time Philadelphia Electric is proceeding with getting the needed permits and so forth from, for example, the Army Corps of Engineers and other agencies as necessary to complete it.

COMMISSIONER ASSELSTINE: Has construction on that been started? Or do they need the permits first?

MR. ROBERT MARTIN: I believe portions of it have, but it has not been completed yet.

COMMISSIONER ASSELSTINE: Okay. And how long will that take to complete?

MR. ROBERT MARTIN: I believe it would be less time than it would take to complete this.

Mr. Boyer?

MR. BOYER: It would take about the same time or possibly a little bit longer, and work has not been started. We have done some preliminary blast survey work in preparation for start-up, but we are waiting for the decision by the Commonwealth Court on the appeal for the Point Pleasant facility.

COMMISSIONER ASSELSTINE: Okay. Thank you.

MR. ROBERT MARTIN: And then once the water has flowed down the east branch of the Perkiomen Creek, it

would arrive at the Perkiomen Pumping Station and be transported through the pump line to the Limerick plant to go into the basins of the cooling tower.

This portion of the system has been completed and is currently operational.

COMMISSIONER ASSELSTINE: Okay.

MR. NOVAK: Thank you.

I would now like to turn the rest of the discussion over to Dr. Murley.

COMMISSIONER ASSELSTINE: Are you going to talk about any water restrictions that apply at the present time to operation of the plant?

[Commissioner Bernthal left the conference room.]

MR. NOVAK: We can, yes, sir.

COMMISSIONER ASSELSTINE: That would be useful to hear just briefly.

MR. ROBERT MARTIN: The restrictions on withdrawal of water from the Schuylkill River are restrictions imposed by the Delaware River Basin Commission upon Philadelphia Electric's withdrawal of water from the Schuylkill River. They are principally active during the warm weather summer months and conditions in the river are unsuitable from an environmental standpoint to permit withdrawal of the water.

When the plant arrives at that point, that's when they would have a need for supplemental water from another

source.

COMMISSIONER ASSELSTINE: I was there, I guess, in late spring and the restrictions, I think, were in effect at the time. They are still in effect, I take it, and will be until this fall some time?

MR. ROBERT MARTIN: That's correct. The restrictions this past spring were temperature limit, which the Philadelphia Electric approached the Delaware River Basin Commission on and got some relaxation in that they went to a dissolved oxygen limit. Temperature was intended to protect the dissolved oxygen limit, basically. That gave them a little bit more flexibility.

There's also a flow rate limitation which, depending upon how much water is in the watershed, is sometimes exceeded.

COMMISSIONER ASSELSTINE: Assuming the present restrictions in force, how much operation and at what power levels can the plant operate under, using the present water restrictions as a limiting factor?

MR. ROBERT MARTIN: Assuming the restrictions in force today, they don't have very much flexibility. However, Philadelphia Electric has applied to the Delaware River Basin Commission for a swap of water currently allocated to two other power plants on the river. I understand that that meeting of the DRBC is to take place possibly tomorrow, and we

would learn the outcome of that.

That would provide, if the PECo application were granted, a sufficient amount of water for them to get up to approximately 20 to 25 percent power level in their start-up test program.

COMMISSIONER ASSELSTINE: For what period of time?

MR. ROBERT MARTIN: That would give them approximately four weeks of start-up testing.

COMMISSIONER ASSELSTINE: Okay. And under the present restrictions you say not very much, which is --

MR. ROBERT MARTIN: I would estimate substantially less than that, yes.

MR. EISENHUT: 5 percent or less. They did complete the 5 percent testing program, but --

COMMISSIONER ASSELSTINE: So under present restrictions, they couldn't do much more than what they've already done?

MR. EISENHUT: I would think that's correct. And I think two other comments. As Bob said, this is during this period of the year.

COMMISSIONER ASSELSTINE: Right.

MR. EISENHUT: Of course, when you go into the fall part of the year, the situation would be changing as a function of time.

COMMISSIONER ASSELSTINE: Right.

MR. EISENHUT: Because of the -- one other issue I ought to point out, and Ed Christenbury can correct me or help me -- we used to regulate in fact temperature controls, environmental limits, chlorides, different parameters in the cooling supply. Even though that's not directly a safety-related system. In fact, it's not a safety system at all. We used to do that. It evolved over time to the point where today we are not putting those restrictions on. We are relying on other federal agencies which govern the supplemental cooling modes.

Ed, would you want to make any comments on how that works?

MR. CHRISTENBURY: Well, I think in this case there would -- I guess we had discussed among ourselves whether there would be a need for any license condition that would reflect the limitations placed on the Delaware River Basin Commission. I guess our thinking now is that probably that would not be an approach we would recommend, nor did we include in the license. The practice, as Darrell indicated, that we currently follow is that where another federal agency or entity has their own federal regulatory powers and enforcement powers, we rely on them to handle those papers.

[Commissioner Bernthal reentered the conference room.]

COMMISSIONER ASSELSTINE: And you are satisfied they

have sufficient authority to impose and enforce those restrictions on their own initiative?

MR. CHRISTENBURY: Yes, we are.

MR. EISENHUT: Well, that's correct. Either way, there is no safety way. If they don't take the water out, they can't operate the plant. If they do take the water out, they operate the plant, but they're in violation of another law, but that's not necessarily a safety issue.

COMMISSIONER ASSELSTINE: Yes. What is the status of the appeal on the Point Pleasant diversion? Are they awaiting an imminent decision, or is it --

MR. CHRISTENBURY: PECo could probably tell us. As you recall, the Court of Common Pleas ruled in favor of PECo and that has been appealed. There's an automatic stay of that decision because it's a state entity, and I'm not certain exactly where that stands.

COMMISSIONER ASSELSTINE: Maybe I can cover that briefly. Okay. Thanks.

COMMISSIONER ZECH: What you're saying, though, is that even if full power is authorized, there are other restrictions on the plant which could prevent them from going to full power?

MR. EISENHUT: That is correct. As a matter of fact, the best information we had was that there is a meeting tomorrow of the DRBC. That commission, as I understand, had

in fact delayed its decision on whether or not to grant this interim relief to Philadelphia Electric who, as I understand it, has requested authority for the withdrawal of water to swap from some of their own fossil plants to their nuclear plant on the Schuylkill River, and it delayed that decision until tomorrow. That decision, if favorable, and if a full power license would issue, would get them up to 20, 25 percent power testing, covering about a month. And then they'd have to wait and see what would be the decisions at that time, after that month, or where you'd stand from a weather standpoint or a water supply standpoint before you'd really know precisely where they go after that.

COMMISSIONER ASSELSTINE: Are there other things that the Basin Commission could do beyond that that would permit power level, or is it basically 20, 25 percent until the weather changes and the rains come?

MR. EISENHUT: I suppose they could do just about anything they want to, but I'd certainly defer to Philadelphia Electric.

COMMISSIONER ASSELSTINE: Okay.

MR. MURLEY: Could we move to slide 10, please.

[Slide.]

I am going to start off with some general management matters.

The bottom line is that the regional staff believes

Philadelphia Electric Company is ready to operate Limerick safely at full power. Philadelphia Electric is a large, well-staffed, experienced utility. They have 20 some years of nuclear experience, going back to Peach Bottom 1, which was an HTGR licensed in 1967.

Peach Bottom 2 and 3, which are boiling water reactors, were licensed in 1974.

Some of their managers and operators in fact were licensed on Unit 1 back in those days. So they bring to it a large staff.

A major strength, we find, is their large engineering and construction management staff. Because of the depth of talent in this area and their QA area, the construction of Limerick went relatively smoothly. And Rich Starostecki is going to talk about that in a little more detail.

Now the same organizational strength does not necessarily carry over into plant operations, however. There have been some problems at Peach Bottom and at Limerick during the last year, and Rich is going to discuss those problems and what we've done about them.

With regard to enforcement history, Philadelphia Electric has had four civil penalties in the last three years. This is somewhat above the average in the region. Most of these enforcement actions were taken for events at

Peach Bottom, however.

There was one problem at Limerick that had to do with the contract security force, which I should talk about. They contract out their guard force activities to Yoh Securities. We found that the root cause of this problem was inadequate control of their contractor force. And we also found a similar problem at Peach Bottom, where they had a health physics contractor that was helping them in the pipe replacement at Peach Bottom 2, and we found problems there, and we think that there is a broader problem with the company in controlling their contractors.

That was the basis for a civil penalty within the last few months. We have discussed this with the utility and they agree that there's a problem and they have taken some actions.

With regard specifically to Limerick, the issue was inadequate training of the guard force and programmatic deficiencies in their security program.

We've talked with them, we've had enforcement conferences. Philadelphia Electric has taken steps to strengthen their onsite management of the contractor at Limerick, and they're required Yoh Securities, the contractor, to provide more corporation oversight.

So we went back in April to take a look at and reinspect the security program. We used a sampling technique

to have selected members of the guard force retest it, and all but one group tested acceptably. That one group did have an unacceptable failure rate on the exam, so we made them be retrained and requalified.

So our conclusion today is that the security force personnel are sufficiently knowledgeable to carry out their duties.

We also believe that the management improvements that were taken by Philadelphia Electric should maintain this oversight to prevent recurrence of the problem.

COMMISSIONER ASSELSTINE: Tom, let me ask you, my recollection is this is not the only place where we've seen some problems with this contractor. Has the Staff thought about, apart from what you've done in this particular case to satisfy yourselves of the adequacy of this group here, taking sort of a step back and taking a broader look at this particular contractor's performance in a number of areas, and asking yourselves what does this mean about the performance of that organization at a number of sites?

[Commissioner Roberts left the conference room.]

MR. MURLEY: Yes. I'd like to ask Tim Martin, my regional director, to talk about that for a second.

COMMISSIONER ASSELSTINE: Yes.

MR. TIM MARTIN: Yes, Tim Martin. We took a look at the Shoreham plant, at the security organization there. We

also did the same thing at the Salem plant. And in both cases they had had problems, but they had turned their situations around.

COMMISSIONER BERNTHAL: Who had turned the situation around, the --

MR. TIM MARTIN: The Licensee.

COMMISSIONER BERNTHAL: You know, I have to say that the -- I guess I don't know exactly what freedom we have to discuss the OI investigation in this matter, but it strikes me that the record of that particular contractor goes beyond the point of sloppiness and oversight at this site, let alone what problems there may have been at other sites. Am I wrong?

MR. TIM MARTIN: You're not wrong, but I don't know what freedom I have to discuss the OI investigation, either.

COMMISSIONER BERNTHAL: Can anybody tell me what freedom we have to discuss the OI investigation?

MR. EISENHUT: Well, let's see, I talked to -- I discussed the matter with Ben Hayes yesterday, and I don't think Ben is down this morning, but because of the present status, we felt that at least preliminarily if we got into this, we ought to have a closed session to discuss it.

COMMISSIONER BERNTHAL: I see.

COMMISSIONER ASSELSTINE: Maybe what we ought to do is think about as a separate matter having a session to talk about this kind of a situation and the performance of the

contractor. I would support something like that.

[Commissioner Roberts reentered the conference room.]

MR. TIM MARTIN: Keep in mind, though, I think we have to maintain the pressure on the Licensee in the first instance to make sure his contractors are doing the job, and that's what we've done, in the case of Salem and Shoreham and Philadelphia Electric.

COMMISSIONER ASSELSTINE: That's certainly true, but at the same time when you see a contractor that operates at a number of sites and you see a pattern of activity that is of significant concern, then it seems to me that this sort of case-by-case chasing around from site to site and --

MR. EISENHUT: That is correct.

COMMISSIONER ASSELSTINE: -- cleaning up the problems may not be the whole answer.

MR. EISENHUT: We have in fact also conducted a survey where this guard force is, at what plants it is, and --

COMMISSIONER ASSELSTINE: Well, that's the other thing, you're looking ahead.

COMMISSIONER BERNTHAL: I want to emphasize that I don't doubt for a moment that PECo is doing everything they can. It's in their great interest, their great self-interest, to deal with the problem, and from my experience and discussions with the management up there, they are a very

capable organization. But -- and therefore, this is a second-order NRC problem. Our first-order dealings are with the Licensees themselves. But we are getting a pattern here of a contractor that seems not to be performing up to standards, and I -- maybe we should talk about that in closed session a little bit, but it seems to me it bears some special consideration by the Commission.

COMMISSIONER ASSELSTINE: I agree.

MR. TIM MARTIN: Just some additional information. Tim Martin again.

Because of PECo's involvement with Yoh, they did require some changes in the corporate staff of Yoh, and those not only addressed the Limerick site, but the other sites that the Licensee or the contractor is responsible for.

They have also brought on a vice president of nuclear operations which is a former NRC inspector out of Region II, and at least to our perspective at our three plants, the contractor's performance under the oversight of the Licensee has improved substantially.

MR. MURLEY: Okay. Moving on. We have received, just on Tuesday, a late allegation that was relayed to us through a reporter, that some safeguards information on the Limerick plant was not being properly protected. We sent an inspector -- a couple of inspectors out yesterday and looked into this, and we determined that the material provided by the

reporter to us is not safeguards information.

But it does raise another question, and so we are going to investigate further to assure ourselves that Philadelphia Electric has adequate controls over safeguards information.

We believe this allegation does not meet the test of safety significance that's in the Commission's policy statement on handling late allegations and, therefore, should not hold up licensing action.

COMMISSIONER ASSELSTINE: Do the questions tend to center on the Licensee or its contractor or a mix of the two?

MR. MURLEY: Well, the nature of the allegation is such that the alleger, who is to us at least still anonymous, said that he has some material here that is safeguards -- he's an ex-security guard, as a matter of fact, is our understanding. He has some material that are like plot plans of the site and some drawings which we have determined are freely available in the FSAR or the Public Document Room, otherwise.

COMMISSIONER ASSELSTINE: Okay.

MR. MURLEY: So we satisfied ourselves that he does not have safeguards information. But it does raise the broader question and we are going to satisfy ourselves that they have adequate controls generally.

COMMISSIONER ASSELSTINE: Okay.

MR. MURLEY: There are no other outstanding allegations on Limerick, and I do understand that the Commission has been informed by OI of the status of investigations regarding Limerick.

I would like Rick Starostecki now to talk about the construction and the operation.

MR. STAROSTECKI: I'd just like to very quickly go through an overview of the construction situation at Limerick, and then address preoperational testing and start-up testing.

The construction overview we conducted in October -- would you put up slide 8?

[Slide.]

In October, prior to issuance of the low power license, we prepared a report that looked specifically at construction and at QA and our recommendation to NRR. And we have had a number of reasons to sit back and say, okay, what have we really seen from all the inspections we've done? We have put over 15,000 hours of inspection time at Limerick.

What we find is that through a variety of mechanisms -- and in particular we've seen it on our team inspections where we've got a variety of disciplines going into the plant -- is that the organization is pretty well controlled by Philadelphia Electric Company, and that there is a very good integration of quality assurance and quality control into the work activities on the construction site.

We have had a resident inspector assigned to the Limerick site since 1979, so we have been able to verify through the day-to-day activities that the QA/QC people are doing the audits frequently. There's a number of stop-work orders that we find have been used effectively by PECo and their contractors, especially when the activity levels were high in the '82-'83 timeframe.

All these details we have put forth in the October 25 assessment, so I won't dwell too much on those first two bullets.

It is of interest to note that in 1979 we did a SALP for construction and identified one Category 3 in the QA area, and I think it is to PECo's credit that they were able to turn that around, and quality assurance has been a strength in the construction SALPs since then.

We have had no Category 3 areas at Limerick for the SALPs in the four years that we have done them at Limerick, other than the first one on quality assurance. So we have had fairly consistent performance with very good management oversight of the major contractor, which has been Bechtel.

This, in our judgment, has somewhat led to, I think, a favorable situation on allegations. We had about 28 allegations at Limerick over the period of construction. Limerick has had no special allegation management system, but the pattern that we see at Limerick has been the same pattern

we saw at Susquehanna and somewhat the same pattern we're seeing at Hope Creek. The major contractor on the site is Bechtel. All three sites have very strong Licensee-management involvement with the crafts and the laborers, and the termination of large numbers of these workers has been done in a very organized and structured fashion.

The number, nature and analysis of the allegations shows that there is no one area that predominates. We have had, for example, three allegations from the Bechtel engineers in San Francisco that we followed up on that affected all three of those plants that I just mentioned. And we were able to, over the course of the year, with the help of both NRR and IE, either resolve the issue or not substantiate the allegation.

So the allegations are clearly indicating to us that, yes, when people have a concern, they get them elevated to the right people within the organization. We have referred several allegations to the Licensee for disposition, and based on our follow-up of their handling of those allegations, we are satisfied that they do a good job on the technical end of it.

With that, I would say from a construction overview standpoint, I'd like to go to the next slide and address what started happening after we left the construction area.

Preoperational testing really was our first look at

how does the utility organization pull together and prepare to do all these tests, and it's our first real look at how the operating staff, the licensed operators and the auxiliary operators pull together with management in the preparation and conduct of all these tests.

We've had no significant hardware problems identified during any of the preoperational start-up test programs. I think just to elaborate a little bit, during the preoperational and start-up tests, the regional inspectors focused very much on the FSAR chapters that describe the systems in preparing their inspection plans on what to be observing. And it's sort of a cascading type situation, as you get through each of the chapters, you then start looking more at the integrated response about this point in time with the power escalation program.

The performance of the test review board was notable strength. We have had several meetings with the Licensee over the preparations for these pre-op tests and the conduct of them, because we've had some engineers expressing concern to us over the long hours that people do work when these tests are done, and a lot of things have been resolved over the last year in terms of the adequacy of how the tests were done and the manner in which test exceptions were reviewed and allowed.

The test review board is in fact a strength in that that's where the utility management gets involved with the

conduct of their program, to make sure it was done right.

Things, I think, really were demonstrated quite aptly with the turbine roll. The preparations for the turbine roll again are strength in that people were trained and management was involved, the simulator was used, and the turbine roll was, I think, a unique, novel, first-of-a-kind activity that was performed without any really difficulty or problems arising.

During the later stages of the pre-op test, we started seeing indicators that we were not happy with. In particular, the resident inspectors would walk into the control room and find situations that they were not happy with. In particular, they would find systems out of commission or components out of commission that would force the operators to take certain compensatory actions in accordance with the tech specs. And that was really the genesis of our concern, that what we call personnel errors -- we were seeing a lack of familiarity with the technical specifications.

In hindsight, that's to be understood, in that the technical specifications for Limerick are much different than the ones for Peach Bottom. And it took some time for the people to become more aware of the limitations imposed on them by these newer tech specs.

COMMISSIONER ASSELSTINE: I take it the concern was

the conditions were such that they should recognize the situation they were in, and they weren't recognizing it?

MR. STAROSTECKI: Exactly right. And because the resident would walk in there and say, "What about this? Doesn't this tech spec control you in this regard, and shouldn't you be doing something about it?" And the answer is yes.

And I make that point simply, that's really the genesis of our concern about operator error. That was further confirmed when we started seeing technician errors with surveillance tests and the way some other problems were handled.

Eventually it manifested itself through LERs. And the point I'm just trying to make is there's a learning curve that the people at Limerick had to go through, and today we are more confident about the operators because the corrective actions were taken. You can walk into the control room today and you have a much greater degree of confidence when you talk to those operators about, one, the tech specs they're familiar with; two, hardware changes have been made, so the surveillances are being done better.

But I want to put the issue in the proper context in that we're not saying we're fully satisfied with everything that's been done. The LER analysis shows that there are fewer LERs, but that's to be expected. There have been fewer

challenges to the plant, since the activities have not been that stressful.

Notwithstanding, we're still skeptical, and we're going to keep an eye on this through the power ascension phase. But by the same token, I think a lot of the learning experiences early on have been well applied through both hardware changes and training and tech spec familiarity.

COMMISSIONER ASSELSTINE: You know, the region had done a fairly extensive readiness review, the long document, before they got their low power license, and this was an experienced utility. Were you surprised at the problems, the numbers of these operator errors, the actuations of emergency safeguard features, the hardware problems that contributed to a large number of 50.72 reports and LERs? Is this atypical from what you would expect for a new plant starting up, particularly a new plant being started by an experienced utility?

MR. STAROSTECKI: My personal observations were that we were surprised when Susquehanna had similar problems when they started up, so having survived Susquehanna and the kind of problems they encountered, this was at first blush not all that different.

What was different here --

COMMISSIONER ASSELSTINE: Different in terms of numbers, wasn't it? I mean particularly for the first three

months of low power testing, I thought there were fairly significant differences in the numbers.

MR. STAROSTECKI: It may be in terms of numbers, but then you start getting into the argument of what rule was applicable at the time. What's more disturbing is the commonality of the technical specifications.

I quite frankly attributed an awful lot of the problems early on to fairly late issuance of the technical specifications.

When you license these operators -- they were licensed about a year ago. The plant was licensed in October. The technical specifications were not issued in their final form until, you know, fairly close to the low power license. So the operators aren't able -- they may participate in the development of the tech specs, but they don't get enough training in the technical specifications. They get training in accidents, in abnormal events on the simulator, but they don't really sit down and look at the tech specs on the day-to-day level that one would expect.

The observations and comments from the examiners that came back to me a year ago were related to that, and they were commenting that a lot of these people referred to their experiences at Peach Bottom, because that is what they were familiar with. The procedures from Peach Bottom, the tech specs from Peach Bottom. And we talked with Philadelphia

Electric about that, and that improved with time.

So obviously I think the sequence of events causes some of those errors up front.

COMMISSIONER ASSELSTINE: How about the pass-fail rate for operators in the first two exams? When I looked through your readiness review report, that didn't look terribly impressive, at least in terms of the first two classes of operators. I'd be interested in your comments on that, again particularly for an experienced licensee that was drawing from people with previous operating experience.

MR. STAROSTECKI: The first exam gave extremely high failure rates to the point that I even had a meeting with the operators who took that first exam, and I think the first exam reflected problems we had with some of our contractors, and they were the ones who had written the exam, and I think on the part of Philadelphia Electric people who were expecting a little different kind of exam.

There is no one clear answer. I will say, I think, that some of the problems I just mentioned -- the familiarity and reliance on Peach Bottom procedures and Peach Bottom tech specs -- contributed to that. But, by the same token, I think our reliance on contract examiners to prepare the exam was also at fault.

Normally the experience we have for the first few exams at one of these NTOLs is that we do experience a fairly

high failure rate -- not as high as what we experienced at Limerick.

COMMISSIONER ASSELSTINE: That certainly wasn't the case for Fermi. It's not your region, but that contrasted rather sharply in my mind. That's one of the things I was thinking about, like the 95 percent pass rate.

MR. STAROSTECKI: I'm comparing myself to Susquehanna 1, I am comparing to Millstone 3, which we currently have underway, Seabrook, which we have just done, Nine Mile Point 2.

MR. MURLEY: They've had high failure rates.

MR. STAROSTECKI: Same kind of situation. The first exam generally gives you fairly high failure rates, but not as high as what we had at Limerick. I would say that the first exam in my mind was an anomaly and I would not say that is characteristic of Limerick.

COMMISSIONER ASSELSTINE: How about the second one? That was a little better, but not much.

MR. STAROSTECKI: Could I have supplementary slide 16, please.

[Slide.]

COMMISSIONER ASSELSTINE: It was better, yes, but it was still 18 candidates for SRO, and 12 out of the 18 passed, and 11 RO candidates, and six out of the 11 passed. It's still pretty high.

MR. STAROSTECKI: In February 1984, we gave the initial exam for reactor operators, and you see a slide up there which shows 50 percent pass rate for the reactor operators, and 58 percent for the senior reactor operators.

Subsequent, in May '84, we still had, I think, unacceptable pass rates for reactor operators, but reactor operators are coming up. And the third and fourth tests I think are a little more typical.

When you look at the numbers of people taking them, I'm obviously gratified by 15 of 22 SROs having passed.

COMMISSIONER ASSELSTINE: What happened between one and two, classes one and two and classes three and four, do you think, to account for the dramatic improvement?

MR. STAROSTECKI: Again, one, we've had more of an emphasis after the first exam on using region-based examiners to do the testing, first of all.

When you look at the failure rates for the first test, you find an awful lot of failure rates occurring because of the written exam. And that's why I say I dismiss the first one as an anomaly.

The others, as I recall, were more of a balance, in not so much reliance on the written exam, but general familiarity with the plant and the practical exam with the simulator and the oral walk-throughs. And I don't think the industry is really used to us giving simulator exams. They've

been used to the practical exam with the walk-through and the written, and we're starting to see more simulator exam failures coming through now, and it's more spread out.

COMMISSIONER ASSELSTINE: Does NRR have any comments on the operator licensing?

MR. EISENHUT: On this particular plant?

MR. RUSSELL: Well, let me give you some feel for what has happened nationwide. The average is about 81 percent pass rate on written exams for ROs, SROs, in that range. Limerick was substantially below that on the written exams for both ROs and SROs.

There is an anomaly, however, in the simulator exams. They were below average for the senior operators, that is directing activities on the simulator, but substantially above average for the reactor operators, the individuals that actually manipulate the controls. They're about comparable for retake exams.

I think Rich was right, the thing that should be pointed out is that they have put a far larger number of candidates up, in the fact that they have 51 licensed operators.

Recall at Diablo Canyon, you had 72 for two units. That's about 36 per unit. And they have 51, and they made a substantial effort to get additional people qualified, and I think they are to be commended for that.

COMMISSIONER ASSELSTINE: I'm going to ask you to comment on one other thing, Rich's point about the other plants in Region I having a bad history on the first take. Is that typical across the country? My impression was that wasn't the case.

MR. RUSSELL: It's not uncommon. There is somewhat of a learning curve on the first examination.

MR. EISENHUT: I would suggest we could certainly put together -- I think I agree with you, Commissioner Asselstine, it varies all over the map. I remember one plant that had 100 percent success rate in the first three years of NTOL. I know another one with a 95 percent rate. So I think it varies considerably.

And I think we do have, Bill, compilations of statistics.

MR. RUSSELL: We have the statistics by region, by plants, and it is in the report we sent to you.

COMMISSIONER ASSELSTINE: Let me ask one other question on the operating experience during the low power testing program. Denny Crutchfield's memo makes the point of -- well, if you look at the trend, things are getting dramatically better, and he broke it down into three-month periods. First three months, quite bad, second three months, much better, and the third three months, dramatically better, and in fact, well below the average for low power testing for

other plants.

How much weight should we put on that trend, given the amount of work that's been done since March? The OPE memo that we got said basically not much had been done since March, and that is that third period. Should we still temper that with caution in terms of how much weight we put on that --

MR. EISENHUT: That would be a good --

COMMISSIONER ASSELSTINE: -- dramatic improvement the last three months.

MR. EISENHUT: I think that would be a good way to look at it. You have to temper that, and any time you look at these statistics -- in fact, I think the last plant I was pointing out, when you look at these, you have to really look at the frameworks they're taken under.

COMMISSIONER ASSELSTINE: Okay.

MR. EISENHUT: I think there is a general trend of improvement. I don't think it's as dramatic as these memos show.

COMMISSIONER ASSELSTINE: Okay. So the sense, I take it, from the Staff is that the kinds of efforts that have been made since that first three-month period really are working; that you are seeing an improvement in operator errors, improvement in these kinds of actuations of emergency safeguard features and these other problems that you were seeing early on?

MR. STAROSTECKI: If you look at LERs and recognize that they really are geared to activities at the plant, you have to go back to the January-February timeframe and say yes, based on limited data back then, it looks like it's improving, but I think I see an awful lot of improvements when we walk into the control room and you talk to the operators, they are more knowledgeable. When you talk to the resident inspector, they are a little bit more upbeat. But I still think it is healthy to have some skepticism once they start doing more activities, to see how it all comes out.

COMMISSIONER ASSELSTINE: What kind of activities are you planning to follow, the full power testing program, higher power levels, to ensure that in fact those early problems have been corrected and you are seeing good performance? Have you got anything special in mind?

MR. STAROSTECKI: We are going to be assigning a second resident inspector to Limerick here in the short term. We have dedicated start-up test engineer from the region is going to be at the site, and we're most probably going to have two start-up test engineers from the region available to the site. So in essence we'll have four people almost daily following the start-up and power ascension program, which is pretty much what we did during the preoperational test program. We had people onsite when the activity was happening, irrespective of the day and night, and I think that

is a little bit unusual.

Again, it's an advantage when the plant is 30 minutes away from the regional office.

[Laughter.]

COMMISSIONER ROBERTS: I guess that depends upon one's point.

[Laughter.]

MR. MURLEY: That pretty much concludes our discussion on the operation experience.

MR. EISENHUT: I guess that pretty well concludes the items we were going to present today.

We concluded the plant does satisfy our requirements. The plant is physically ready, operationally ready to receive a full power license.

It was my understanding, based on discussions with the utility this morning, that the plant is heating up, they do plan or they're hoping to go back to criticality about noon today, or early afternoon. They are awaiting the license to proceed past the 5 percent point as soon as they get to that point.

That concludes our briefing at this time.

COMMISSIONER ROBERTS: Any other questions?

COMMISSIONER ASSELSTINE: I have a few more, but maybe somebody else wants to ask some first, since I have been asking a few.

COMMISSIONER ROBERTS: Go ahead.

COMMISSIONER ASSELSTINE: Okay. A couple on the license.

Page 5 of the draft license. I noticed item 9, turbine system maintenance program. I was just curious what led to that requirement.

MR. ROBERT MARTIN: This was an issue that came up in our SER review quite some time ago. At that time we were looking at protection against the possibility of turbine overspeed events, and we reviewed the history of the issue at the time, and identified a program that specified the Staff's criteria, what we were looking for in this area. And generally speaking, I understand that the utility, in conjunction with General Electric, is working on a program, a more formal program, to be submitted perhaps as a topical report, and we plan to come in some time in the future with it.

In the meantime, we specified certain things that must be done periodically to inspect the turbines to protect against the possibility of turbine overspeed and destructive event.

COMMISSIONER ASSELSTINE: Is that a unique problem for this plant?

MR. EISENHUT: No, it's generic. It's not really aimed so much at eliminating the overspeed as much as given an

overspeed, you want to make sure that the turbine rotor is in good enough condition that you don't have a turbine missile problem.

MR. ROBERT MARTIN: That's correct.

COMMISSIONER ASSELSTINE: Okay. The second question I had was on page 6 of the draft license, item No. 12, the remote shutdown system. I was interested in understanding a little more about what the problem there was with the remote shutdown system.

MR. ROBERT MARTIN: The Staff requirements, in response to GDC 19, are that the remote shutdown system shall have two independent trains of equipment, separate and redundant trains of equipment of safety grade equipment to bring the plant down in the event the operators have to evacuate the control room for some reason.

One train already existed prior to this issue. We were reviewing the capability of the other train and identified a list of things at the time we issued the low power license that needed to be done. Since then some of those things have been satisfied, and what we were left with at this time was the requirement to put transfer switches to handle the transfer of control of three specific pumps, transfer the control from the control room to the remote shutdown panel. And in that interim period, until those transfer switches are put in, the Licensee has presented a

description of how jumpers, in accordance with procedures, would be used to effect this control.

And so that is what that condition is about.

COMMISSIONER ASSELSTINE: Okay. And when are they going to have that fixed so they don't have to lift leads and rely on jumpers?

MR. ROBERT MARTIN: It would be prior to start-up, following the first refueling outage.

COMMISSIONER ASSELSTINE: Okay. And also I was interested in the next item, too, what the issue was with the operation of the partial feedwater heating.

MR. ROBERT MARTIN: That's simply that the analysis is not encompassing enough to cover that mode of operation, so we precluded it as a possibility.

COMMISSIONER ASSELSTINE: Okay. I also had a couple of questions on the exemptions under item D on page 7. I take it the GDC 19 exemption is for the standby shutdown?

MR. ROBERT MARTIN: That is correct.

COMMISSIONER ASSELSTINE: Or remote shutdown panel. Okay.

How about the first one and the second one? A, which is exemption from GDC 61, operation of that portion of the standby gas treatment system; and the second one, exemption from GDC 56 for containment isolation valves, hydrogen recombiners.

MR. ROBERT MARTIN: The standby gas treatment system, one, is basically the ductwork that would connect the ductwork and other equipment that would be used to connect the refueling floor area into the STGS, has not been completed. Since there will be no spent fuel and thus no radioactivity in that area until the first fuel is removed from the reactor core, there would be no radioactivity hazard.

COMMISSIONER ASSELSTINE: Okay. And the second one, GDC 56? Automatic --

MR. ROBERT MARTIN: This is one of the additional isolation valve on the hydrogen recombiner lines. There is already one isolation valve in each of these lines. Our requirements, pursuant to GDC 56, is that there shall be a redundant one for each line coming into and going out of containment. And that condition is directed at requiring the installation of the second one prior to start-up, following the first refueling outage.

COMMISSIONER ASSELSTINE: And also I had a question about H on page 8, which has to do with inerting. I guess I was wondering why they won't be inerting, and is the six months specific in terms of when they will be inerted?

MR. ROBERT MARTIN: That one was required based on the stretch-out of the start-up testing program. Had the testing program, for instance, proceeded without delay, it is quite possible they would have completed their start-up test

program and gotten to a point to where they could inert within the six-month time period called out in 10 CFR Part 50.44.

However, since the plant has been shut down since April and they have not completed their testing, they needed the exemption from the regulation to permit them to continue the start-up test program, without having to inert the containment, which would otherwise present them with difficulties as far as getting people into and out of the containment to observe status of equipment and so forth as they were starting up.

COMMISSIONER ASSELSTINE: Okay. But that will in fact be done within six months, so at that point they will be inerted from then on?

MR. ROBERT MARTIN: That's --

MR. NOVAK: Well, what they had done --

MR. ROBERT MARTIN: The limitation would be they shall inert by the time they reach either 120 effective full power days of core burnup, or by the time they reach the 100 percent thermal power trip test, which generally marks the end of the start-up test program.

COMMISSIONER ASSELSTINE: Okay. You mentioned EQ earlier, that the plant was basically in good shape on environmental qualification. I know from one of the OPE memos they have given us on one of the Board decisions, that there was a question at least at one point in time about the

Limerick pressure temperature profile.

Has that now been -- and it seemed to me that that was characterizing the environment for which the equipment would have to be qualified. If they had had a lower base than other plants did. Has that issue now been settled so that --

MR. ROBERT MARTIN: That was an open SER review issue at the time, and it has subsequently been closed out.

COMMISSIONER ASSELSTINE: Okay. And I take the Staff is satisfied with that lower profile?

MR. ROBERT MARTIN: We are.

COMMISSIONER ASSELSTINE: Okay.

MR. ROBERT MARTIN: What we did, we -- there was a lower profile in the Licensee's documentation, and what we did was verify that all the equipment would satisfy the higher profile in a Staff document, NUREG 0588, directed at the environmental qualification.

COMMISSIONER ASSELSTINE: And the last other question I had, other than a couple of emergency planning, had to do with the PRA, and I noticed -- again I think it was in an OPE memo that they had given us -- that there were a number of changes that had been made to deal with the ATWS question, and that in fact those changes had resulted in reducing the frequency of ATWS sequence by a factor of 10. And I guess it was more curiosity on why, to what extent we considered those kinds of changes when we considered -- when the Staff

considered the ATWS rule, and why those weren't included in the ATWS rule.

It's basically, I think, what, improvements in the automatic depressurization system, and improving the reliability of RHR.

MR. BERNERO: This is Bob Bernero of the Division of Systems Integration and the NRR Staff.

Those things, I don't recall them being specifically considered in a generic way during the ATWS rulemaking. We considered automation of the standby liquid control system, which is one feature that Limerick has, but not those things as such in the ATWS rulemaking.

COMMISSIONER ASSELSTINE: In view of the fairly dramatic improvements they had, maybe we ought to take a look at some of those.

MR. THADANI: Ashok Thadani, Division of Safety Technology.

During the early discussion of ATWS proposed rule, there were a number of alternatives considered. In fact, one alternative was very close to what Limerick has implemented, what we call 86 gallons per minute capability for automatic actuation, in terms of poison.

We had an option which also considered much greater capacity, which could have taken care of additional failures as well. Various options -- we did a bunch of cost-benefit

studies as well.

COMMISSIONER ASSELSTINE: I remember those.

MR. THADANI: There were a lot of arguments, I think you might recall, in terms of what is the reliability of the protection system. Considerable uncertainty was involved. Even today people think that a number of Staff assessments were overly conservative. Judgment was arrived at as a result of a number of discussions that for plants which were operating, the improvements in the reactor protection system, as well as improved capability for injecting poison, 86 gallons per minute, was adequate.

But in terms of Limerick, the initial design had already incorporated the automatic actuation capability, plus they have a three-train system, which in my judgment, and I think the judgment of most of the Staff members, is that improved safety significantly.

COMMISSIONER ASSELSTINE: And yet they still went beyond those and did these other things as well.

MR. THADANI: They went well beyond the ATWS rule, and they went well beyond the next level of protection that we considered --

COMMISSIONER ASSELSTINE: That's right.

MR. THADANI: -- and they're pretty close to the best system that we have analyzed.

COMMISSIONER ASSELSTINE: I find it very

interesting, what they've done, and commendable.

MR. THADANI: I think so. And in fact, that is just one example. Tom Novak mentioned to you earlier that there were a number of other areas where they have moved forward and done a number of things. Very positive, I think.

COMMISSIONER ASSELSTINE: Okay. I had a couple of quick questions on emergency planning that basically were concerns that had been highlighted in I guess it was the Second Partial Initial Decision by the Board, and I was just wondering what follow-up had been done on those items.

The first one had to do with meeting the requirement in NUREG 0654, planning standard J-5, that the Licensee has to be able to account for all individuals on site within a 30-minute time period, including construction workers at Unit 2.

Can you tell me what, if anything, has been done to -- or did the exercise show that they can in fact do that?

[Commissioner Bernthal left the conference room.]

MR. COLLINS: There was an inspection report that was put out August 2nd which documented the results of the remedial exercise, where the Licensee went through the various stages of declaration of an emergency, and demonstrated the capability of evacuation and accountability of personnel.

I think for Unit 1 that was within 23 minutes. I'm quoting off the top of my head. And they also demonstrated

the evacuation of Unit 2. And the inspection report shows that that area was adequate.

COMMISSIONER ASSELSTINE: How about the emergency hospital care, too, at Pottstown Memorial Medical Center? Did the personnel get the training they need in handling contaminated individuals? And did the exercise confirm that as well?

MR. MATTHEWS: It is my understanding that the Applicant will be able to directly respond to that, but it is my understanding that all the training that they committed to with regard to Pottstown Memorial has been completed.

Does the Applicant have any information?

MR. BOYER: That is correct.

COMMISSIONER ASSELSTINE: Okay. And how about the conflicting responsibilities question for the Goodwill Ambulance Unit? Did the exercise show that in fact they would be able to carry out both their onsite and offsite responsibilities?

MR. MATTHEWS: FEMA has reviewed that, and they have concluded favorably with regard to the fact that there is no conflicting problem existing.

COMMISSIONER ASSELSTINE: Good. How about -- there were a couple also from the Third Partial Initial Decision. One of those was this one-lift evacuation issue where you have to get all the school children out in one wave. Did the

exercise show that that requirement of Pennsylvania law would be satisfied?

MR. MATTHEWS: It is my understanding that the plans commit to that, and FEMA has reviewed it in the form of their plan review and their observation of those portions that were exercised, that that is a feasible plan for implementation.

COMMISSIONER ASSELSTINE: Okay. And have all of the letters of agreement with bus drivers, schools, health care facilities, reception centers, have those been completed?

MR. MATTHEWS: I will have to defer on that one to our representative from FEMA, who is with us today, Robert Wilkerson.

COMMISSIONER ASSELSTINE: I gathered at the time that the Third Partial Initial Decision in the record was closed, most of them had, but not all of them had.

MR. MATTHEWS: I could say in summary that the Staff was aware of all those outstanding issues that OPE had identified with regard to their review of the initial decisions, insofar as they related to emergency preparedness, and the Staff, FEMA, and Region I have gone over those in detail and confirmed to their satisfaction that all of the issues raised by OPE in that memo have been satisfactorily addressed.

COMMISSIONER ASSELSTINE: Okay.

MR. MATTHEWS: Would you like to hear from FEMA on

that issue?

COMMISSIONER ASSELSTINE: Yes, on that one.

[Commissioner Bernthal reentered the conference room.]

MR. WILKERSON: My name is Bob Wilkerson. I am with FEMA.

With direct response to your question, Commissioner, all those agreements have not gone through the legal formalities of completion. Our regional staff has assured through review and phone contact with all the parties involved that there is a meeting of the minds, and it is simply the matter of the signatures, and that the training has taken place, has been provided, that there is adequate assurance that were the need there, that the drivers would respond, there is adequate resources, and there would be no problem.

COMMISSIONER ASSELSTINE: Good. So the school staff and bus drivers basically, the training has been done?

MR. WILKERSON: The training has been provided and it will be provided on a repetitive basis to provide refresher training.

COMMISSIONER ASSELSTINE: Okay. Thank you. That covers the questions I had.

COMMISSIONER ROBERTS: Any other questions? We are already over time. Can we proceed?

COMMISSIONER BERNTHAL: The only comment I would

make is that I would hope that we would have some time to hear from Ben about this problem that I raised earlier with the security force people, and I would like to hear what the Licensee has to say about the steps that they have taken.

COMMISSIONER ROBERTS: Well, we are going to hear from the Licensee.

COMMISSIONER BERNTHAL: Are we planning to do that today, or when are we going to address that issue? I thought that we were going to --

COMMISSIONER ROBERTS: It was my intention -- not today.

MR. EISENHUT: I think, if I am not mistaken, the activity of OI is complete.

COMMISSIONER ROBERTS: Yes.

MR. EISENHUT: With respect to Limerick.

COMMISSIONER BERNTHAL: Oh, yes, I understand that.

COMMISSIONER ROBERTS: Well, let's not -- what you're interested in is not germane to what we are about today.

COMMISSIONER BERNTHAL: Well, let's hear what the Licensee has to say before we decide whether it's germane, because they're one of the licensees that has had a problem there.

COMMISSIONER ASSELSTINE: It may be separable, though. I think it's separable.

COMMISSIONER BERNTHAL: It's separable, I agree. The question is, should we let that slide for another month. But let's go ahead. I'm finished with this.

COMMISSIONER ROBERTS: Any other questions?

COMMISSIONER ZECH: No, I don't have any other questions.

COMMISSIONER ROBERTS: All right. We thank the Staff and ask them to stand by.

The Commission has had a request from Phyllis Zitzer, president of Limerick Ecology Action, to speak. We are going to ask her to speak, but please limit her remarks to five minutes.

MS. ZITZER: I want to thank you for this opportunity to address the Commissioners today.

My name is Phyllis Zitzer. I am the president of Limerick Ecology Action, which has participated in this operating license proceeding as the lead intervenor.

We do not believe that the NRC should grant an operating license for the Limerick Nuclear Power Plant. We also believe that it would be irresponsible for you to consider issuing a license for this facility today.

It has been recently disclosed that the FSAR for Limerick does not contain a site-specific analysis of how Limerick would respond if there was a loss of offsite power during an accident at Limerick.

There was some information in our newspaper yesterday. I hope that you have been informed of this. I would assume you have been.

However, the quote that was in our paper yesterday from Mr. Kelly, the NRC senior resident inspector at Limerick indicated that it was his belief that before the NRC would vote, that the FSAR would be reviewed and rereviewed for any other errors, and that as of yesterday, according to him, this matter still was up in the air.

We strongly object to the consideration of licensing this facility until and unless the FSAR has been properly reviewed and revised to include the required analysis which we believe must be provided to the parties in this proceeding.

Also, as stated by this gentleman, this omission raises serious concerns about the adequacy of the FSAR as well, and any other possible omissions.

Ever since the 1979 coremelt accident at the Three Mile Island facility, which forced the NRC to abandon its naive faith that no serious nuclear accident could ever occur at a licensed facility, the Commission has reexamined the wisdom of siting large nuclear power plants in major metropolitan population centers.

The hindsight of wisdom, however, could not be applied to the Limerick facility under construction prior to 1974 and sited a mere 25 miles from one of the largest

metropolitan population centers in the United States -- the city of Philadelphia.

Preliminary probabilistic risk assessment analyses performed by the NRC following the destruction of the agency's confidence in its own certitude of nuclear reactor safety, identified three reactors in the United States as posing a risk substantially above average: Indian Point, Zion and Limerick.

Limerick was identified as being one of the most hazardous reactors in the country. The Director of Nuclear Reactor Regulation, Harold Denton, testified in an Oversight hearing before the Subcommittee on Energy and the Environment of the Committee on Interior and Insular Affairs of the House of Representatives at a special hearing on nuclear siting and licensing on May 27th, 1980 in Bucks County, Pennsylvania.

At that time Mr. Denton said that given the siting standards now, that with a local population density greater than 500 people per square mile, the NRC would conduct a very expensive search for alternative sites.

The population density at Limerick was twice that in 1980. Obviously it is far too late to search for alternative sites in this situation. The only possible means to reduce the risk at Limerick was to examine design changes.

Mr. Denton also said that if the risk at Limerick were found in fact to be greater than the average reactor,

that the NRC would consider design changes.

Since that time the risk at Limerick has not been shown to be less than the average site, but in fact substantially greater.

The statistics that were presented before the House Interior Subcommittee on Oversight concerning reactor accident consequences had shown that Limerick is among the worst in the country. The worst accident scenarios for every nuclear power plant in the country were presented before the committee. With respect to early fatalities, Limerick was the third worst in the country, with an estimated worst case scenario of 74,000 people dead.

It is interesting to note that with respect to early fatalities, it is plain that the State of Pennsylvania is the worst state in the country for nuclear reactor risks to its citizens. The top 10 reactors with the risk for early fatalities include Limerick, Peach Bottom, Three Mile Island and Susquehanna.

In the entire country, four out of the top 10 highest nuclear risk reactors are located within Pennsylvania.

With respect to early injuries, Limerick 1 is the worst in the country, with 610,000 projected early injuries in a worst case scenario.

The next closest reactor to that had 340,000 early injuries.

With respect to cancer deaths, Limerick is projected to be the fifth highest in the country.

With respect to economic damages, Limerick was projected to be the third worst in the country.

The recent site-specific risk assessment done by the NRC for the Final Environmental Statement shows the risk of a core accident at Limerick to be one in 1000 per reactor year. Over a 40 year projected operating life, the chances are about one in 25. If two reactors are completed and operated at Limerick, we have about a one chance in 12 that there will be a core damage accident at the Limerick site. The chances that 1000 people would die of latent cancer caused by an accident at Limerick was estimated to be a little less than 1 in 25 over the projected 40-year life.

If two reactors are operated, there is about a one chance in 12.

Limerick Ecology Action has attempted since the beginning of this proceeding, which did begin in 1981, to force the NRC to seriously consider design changes to the plant.

COMMISSIONER ROBERTS: Pardon me. You have exceeded your five minutes. Could you quickly finish.

MS. ZITZER: Certainly.

Despite analysis done by the Commission's own contractor showing that the cost effective risk reduction

measures could be made, including some potential design changes which would eliminate almost 95 percent of Limerick's severe accident latent cancer risk, the Commission has consistently refused to consider those design changes in this licensing proceeding.

We have appealed these matters as well as the Third Partial Initial Decision to the Appeal Board, which has refused to make a decision on our appeals.

At this time we are left with no choice but to prepare to pursue these appeals before the judicial courts and are prepared to file an appeal immediately once you act, if you do so today, to ensure that judicial review is obtained so that these issues can be reviewed by the Third Circuit Court of Appeals.

We respectfully request that any order authorizing full power operations for Limerick therefore be made effective no sooner than 14 days after your decision, for the purposes of judicial review by the Third Circuit Court of Appeals.

We do not believe that the court would respond favorably to your failure to allow a reasonable period of time for judicial review.

I want to thank you again for the opportunity to speak.

COMMISSIONER ROBERTS: Thank you. And I would ask does anyone have a question of Ms. Zitzer?

COMMISSIONER BERNTHAL: I guess I don't have any particular question. I would like to -- for the record, though, I think the Staff should respond to some of the PRA numbers that we've had thrown at us here.

COMMISSIONER ROBERTS: All right, why don't we --

COMMISSIONER BERNTHAL: It's useful, I think, to place that in perspective for the public.

COMMISSIONER ROBERTS: All right, why don't we hear from the Licensee, and then we'll hear from the Staff, and let Staff comment both on the matter you speak of and whatever the Licensee may have to say.

COMMISSIONER ASSELSTINE: Right before you do that, Tom, I don't have any questions, but just a couple of comments on the loss of offsite power analysis. In essence what I hear our Staff telling us is that the Licensee has now done its review to show that they're within the bounds of the original accident analysis, and they've made sure that this is an isolated problem, that this wasn't something broader; and that the Staff has looked at it enough to satisfy themselves that in fact the Licensee is right. Granted, the detailed written explanation of their review hasn't been done, but it did seem to me that from what the Staff was saying, they're satisfied that the analysis now has been done and corrected to deal with that problem.

And I guess I'm wondering whether you still had your

concerns about that item. I recognize the quotes that our resident inspector had said, but it does seem now that more has been within the past few days beyond what he reflected in the statements that were in the newspaper.

MS. ZITZER: My belief is that it is such a significant issue that we would want additional assurances, and we would hope that the NRC would want those same written assurances before it took any action that would result in the authorization of full power operation.

COMMISSIONER ASSELSTINE: My second one is more comment with regard to your concerns about siting large nuclear plants in high population density areas. I'd have to say I agree with that concern. My own view is that you're right, that the potential consequences are substantially higher. I don't know whether your numbers are the right ones or not, but -- and I personally would favor taking a look over the long term for additional measures that could be taken to reduce that.

I would also have to say, though, that it does appear that some of the things that the Licensee has done at least move in that direction. They have in some areas gone beyond what other plants have done, and I think in partial recognition of the fact that they are in a high population density area, and the potential consequences of a severe accident are worse there than at other sites.

But I would agree with you, that more should be done for the high population density sites over the long term, and second, that we ought to insist upon a very high level of operational competence and demonstrated performance from the plants in the high population density areas. Because I would agree with you, they are different.

COMMISSIONER BERNTHAL: I would just comment, if I may, that beyond agreeing that we ought to take a look at these plants, we are in the process, this Commission has promulgated a severe accident policy statement, and one key element of that statement and the action that will come out of it will be to do the kind of evaluations that need to be done, and frankly this Licensee has begun to do already for this plant. There will be further work along those lines associated with the source term, latest source term data and research work as it fits in with severe accident policy statements.

So one of the Commission's objectives, and the thing we are about to begin, is an evaluation of particular plant designs and further confirmation, one hopes, of the safety margins that we believe to exist in those plants.

So I want to compliment you on a cogent statement, but I also want to reassure you that some of the concerns that you have are being addressed, as Jim has suggested, by this Licensee and, I would also suggest, by actions that the

Commission has decided to take in the wake of its severe accident policy considerations.

COMMISSIONER ASSELSTINE: My colleague knows that we have got some differences on whether we have gone far enough on the severe accident policy statement or not, but I hope he's right, that the detailed plant reviews such as the efforts that have been undertaken so far by this Licensee -- and hopefully that will continue -- I hope he's right, that they will continue to search for ways to improve the level of safety and reduce the risk of severe accidents and the kinds of consequences that you describe.

MS. ZITZER: If I just might comment briefly. Our major concern stems from the fact that almost a year ago we appealed the Second Partial Initial Decision, and in that appeal have documented the design modifications we believe are cost effective for Limerick and we believe the evidence shows are cost effective.

We already believe that low power operation has made it much more difficult to even consider those, and certainly full power operation will make it more difficult, if not entirely moot the whole discussion.

That is the reason we are moving immediately into the Third Circuit Court of Appeals, frankly to get some kind of a decision one way or another on the issues we have raised in our appeal of the Second Partial Initiation Decision.

And again, I would like to emphasize, we would appreciate your consideration of any order authorizing full power operation not being made immediately effective for a reasonable period of time, so that the court could consider those appeals.

And I thank you again.

COMMISSIONER ROBERTS: Thank you very much. Thank you.

Now we will hear from the Licensee. It is my understanding we have Mr. Everett and Mr. Boyer. Would you gentlemen please join us. And I would ask you also to limit your remarks to five minutes. Of course you will be questioned by us.

MR. BOYER: Yes. Thank you. My name is Vincent Boyer. I am Senior Vice President for Nuclear Power for Philadelphia Electric.

From the earliest part of the design stages of Limerick, we recognized the limitations of the site and our plant design has incorporated features which reduce the potential hazards to the public.

The management of Philadelphia Electric Company is committed to safe operation. We have been leaders in the development of quality assurance programs. We have been leaders in the development of and the implementation at Limerick of all the Appendix R fire protection programs and

the equipment qualification programs. We have not had any quality problems at Limerick due to the extensive quality assurance and quality control programs which we have initiated, both in our construction and in our operational areas.

With regard to the Chapter 15 error, I will note that it was an isolated case. We have spent extensive investigation in a multi-pronged effort to confirm that. The analysis which was in the FSAR referred to a design which was changed in 1974 to effect an improvement in the plant performance, so that the analysis was a bounding one and was conservative, so that it was on the safe side in the FSAR, though it did not truly represent the actual design that presently exists. This is being corrected by a change in the FSAR.

The simulator was programmed correctly, and the training which has been conducted has been based on the true plant design.

In the area of low level waste, we have been finalizing the preparation for shipment of low level waste with Region I. We have installed a facility at Peach Bottom for five years storage of low level waste. This facility could be used, if necessary, at Limerick, and we have plans, potential plans in the future, if necessary, to construct a similar facility at Limerick. So we do have plans,

contingency plans for low level waste.

With regard to the water situation, the matter relating to Point Pleasant was argued on June 6 on an expedited basis before the Commonwealth Court of Pennsylvania. We are presently awaiting that decision.

In the meantime, we have obtained a docket change from the Delaware River Basin Commission so that we can withdraw water from the Schuylkill River when the flow is adequate and the oxygen levels are adequate, and we are monitoring the oxygen levels at six points in the river, six times a day.

Tomorrow we will review -- the Delaware River Basin Commission will review and hopefully approve the reallocation of water from two existing plants for use at Limerick. They considered this a week or two ago, and decided that they did not want to prejudice the decision on the part of the Nuclear Regulatory Commission, so they deferred action until after the NRC had acted.

[Laughter.]

They agreed, however, to hold a hearing the next day, which they are doing.

We have also submitted a request for the discharge of water from an unused strip mine near Pottsville, Pennsylvania, which contains 2 billion gallons of water of reasonable quality. We have submitted our applications to the

DRBC and to the state for the discharge of this water which would satisfy our needs for over a five-month period.

Thus, I think that we will not suffer any extensive limitations in our plant operation due to limited water. But, of course, we will in the meantime pray for rain.

[Laughter.]

With regard to --

COMMISSIONER ROBERTS: Mr. Boyer, I'm sorry, could you summarize quickly.

MR. BOYER: Right. We have definitely gotten the attention of our security contractor. We have made extensive changes, both in the way that we monitor his operations and the way he conducts his operations, and I can assure you that we have effected improvements, and I think that this will be seen as you conduct a review, as the Staff conducts a review in its total operation in all projects.

With that I will pass to Mr. Everett.

MR. EVERETT: Gentlemen, I appreciate the opportunity to be here also. This is not my first time in these halls. It goes back to 1954 and '55 with Fermi 1, and again with Peach Bottom 1 in the late '50s, early '60s, and then with Peach Bottom 2 and 3, and now with Limerick. I am quite used to being here, as a matter of fact. I don't come as often as I used to, because others know more about these plants than I do now. In fact, I think I predate most of you

in my activities in the nuclear industry.

It has been my responsibility to see that the nuclear interests and nuclear functions of my company, Philadelphia Electric, were properly developed. With the completion of Limerick 1 and hopefully Limerick 2, 60 percent of our electricity will come from nuclear power plants.

It has organized or reorganized our entire company around the nuclear functions. We are completely a different company today because of our nuclear involvement than we were before we got into the nuclear generation business.

We are highly competent, we've developed a good team of people, they're dedicated, they work together as a team, and they work openly with this Commission and its Staff. Most often we report errors or violations voluntarily before they are detected obviously by the inspectors, and that's the way we'd like to be. We not only want to operate this plant safely and competently, but we want it to be viewed by this Commission, its Staff, and therefore the public in that vein.

With respect to contractor personnel, I think every generation of engineering managers has to learn that a contractor is only as good as you make him be. And we found that out in the case of Yoh. I can assure we do have his attention, and he will be a good contractor, because he won't do business unless he is. And therefore we have learned that again painfully in this particular case, and I suppose we will

keep on learning it, but that is the nature of the contracting business.

I have Graham Leitch here, the station superintendent, to my left. He has trained a very competent staff. No one is perfect. I wish we could tell you we have reached that degree of human perfection that would make us different than anybody else, but obviously we can't. We are going to continue to strive for it, and we are going to strive to be the best in the business.

Gentlemen, I think we are ready for license.

COMMISSIONER ROBERTS: Thank you, sir.

Are there questions?

COMMISSIONER ASSELSTINE: Just one brief one, and that would be, I'd be interested in your perceptions of both your operating licensing program and your early experience with that, and also the experience with the low power testing program, and both the way you perceive that program and where you think you are now, and what you have done to get yourselves to that point, and all summarized in one minute.

MR. BOYER: It was an excellent program, and we did not have any difficulties of any consequence arise as a result of that. Now I would ask Graham to speak to the operator examination and make any other comments he'd like to make.

MR. LEITCH: Just another comment on the low power testing program, if I might. We feel that we very

successfully completed both the open vessel phase and the heat-up phase of the testing program. We were particularly gratified by our ability working with the NRC to develop procedures which allowed us to roll the turbine and indeed synchronize the turbine and run the turbine for a 24-hour period at very low loads.

So we feel that by so doing, we have expanded the envelope of knowledge of the plant, perhaps greater than it would normally be the case under a 5 percent license. We feel very confident with the results of the low power testing program.

We have recently conducted what we call our plateau review where we summarize and review the results of all those tests. That plateau review has been conducted and approved by the plant operations review committee, and we feel that we are ready to move ahead.

With regard to the operator licensing area, we were, as you, somewhat disappointed with the results particularly of the first examination. We had some people in that exam who were senior licensed operators at Peach Bottom that were candidates for senior license at Limerick. We would have expected those people to have no difficulty whatsoever. We were surprised.

I think the exam was somewhat challenging. It was a very difficult exam, and I think perhaps not directed so much

to the kind of knowledge that one might expect an operator to have.

Nevertheless, those people went through the second exam and indeed did an outstanding job. I'm recalling scores now in the cases of some of the failures on the first exam, scores of in the high 90s. Just an outstanding job on the second exam.

So we would agree that there was a certain amount of anomaly in tht first exam. We are continuing to prepare people for senior licensing exams, and we plan to put up another class of about 16 candidates for senior license, both operator types and engineer types, in a November examination, and we are very hopeful of a high rate of success on that exam.

MR. EVERETT: With respect to the general observations over a long, long period of time, as far as licensing, training, et cetera, we have seen a tremendous evolution, obviously. The Peach Bottom 1 construction permit hearing took one day. The construction permit hearings for Peach Bottom 2 and 3 took two days. The construction permit hearings for Limerick took four years, approximately. I don't know what the next one will take, but I won't be around to pursue it.

We have seen that same evolution in the requirements for operator training and operator testing. As more and more

emphasis is placed on personnel, obviously more and more is required of those people, and more is required to be demonstrated of their competence. And unless there is an understanding in the Licensee's own shop of what those new requirements are going to be, we simply are going to always be running to catch up with the increasing difficulty of the nature of the requirements.

We have seen the same thing in the plant design. Peach Bottom 2 and 3 cost $375 per kilowatt, finished. Limerick will cost over $3700 a kilowatt. They were designed by the same people, built by the same people, bought from the same equipment manufacturer, and supervised by the same utility. And the difference, you well know, was caused by inflation and additional requirements.

How far that is going to go, nobody knows. But that's where we are today.

COMMISSIONER ROBERTS: Thank you.

COMMISSIONER ZECH: Let me just make one quick comment, if I may. I think you are to be commended for the many initiatives you have taken that certainly have the potential for increasing the safety of operations for your plant.

You are an experienced utility, and in my view you should be well above average in all respects, but frankly I was disappointed when I heard about the personnel errors, as

Mr. Boyer knows, you had initially. And I recognize that moving from Peach Bottom to Limerick is a different plant and so forth, but it seems to me that no matter what, the message should be that continual vigilance and supervision is necessary. And I think that even though you are experienced, it seems to me that if I were you, I would be very watchful and very mindful of the way things went, and I think certainly there should be no complacency set in.

I think you should have an attitude of doing it right and working hard at it, rather than accepting of the personnel errors for some other --

MR. BOYER: We have not accepted them.

COMMISSIONER ZECH: -- as things that just happen. Because they don't happen. And my view is that management should be involved in analyzing those errors and benefiting from them, and lessons should be learned and so forth.

So even though you are experienced, I think you should recognize that perhaps you can do an even better job than you're doing.

MR. EVERETT: Our motto is going to be we'll never rest until we're the best.

COMMISSIONER ZECH: Good motto. But you have got to follow through on it.

MR. EVERETT: Absolutely. And we intend to.

COMMISSIONER ZECH: Good.

COMMISSIONER ASSELSTINE: I would agree very much with the comments that Commissioner Zech just made. I think he's right on the mark. I think all of us, quite frankly, were a little surprised at some of the problems that occurred.

MR. BOYER: I think it's partly due to the fact that the operators hadn't been working with the tech specs for a long period of time, and suddenly this whole bible of documents and requirements is thrust on them. And it takes a while to work into them and become familiar with them.

MR. EVERETT: Well, we won't make excuses. We'll just make up for the failures of the past by the success of the future.

COMMISSIONER ASSELSTINE: Good.

COMMISSIONER ROBERTS: Any further questions?

COMMISSIONER ASSELSTINE: No.

COMMISSIONER ZECH: No.

COMMISSIONER ROBERTS: Thank you, gentlemen.

MR. BOYER: I would like to thank the NRC Staff Region, Washington and Bethesda, for their cooperation through the whole entire construction and preoperational program. We have worked well together. They've worked hard and our engineers of Philadelphia Electric and operators of Philadelphia Electric have worked extremely diligently and hard, too.

COMMISSIONER ROBERTS: Thank you. Thank you.

Now why don't we have the Staff rejoin us.

Based upon what we have heard, do any of my brothers have any questions of the Staff?

MR. EISENHUT: I would like to try to clarify the question that was referred to us just a second ago, if I could, just very briefly. And that is the question of the Staff did require a PRA on this plant and an examination of what additional features should be in the plant. We went through that process over the last four or five years.

We concluded that the probability of coremelt in this plant was orders of magnitude less than was referred to earlier. The number of something like 1 in 30,000 sticks in my mind. But it's that order of magnitude for the probability of coremelt.

The probability of early fatalities, of course, is even less. And those numbers were done without consideration of any of the source term considerations.

Some of the numbers referred to were, I believe, referred back to the numbers of the worst case estimates that were in our Final Environmental Statement. These issues have been debated quite a bit. In fact, they were the subject or some of them were the subject of the Second Partial Initial Decision, and although the Commission completed its Immediately Effectiveness Review, that issue still is pending before the Appeal Board.

COMMISSIONER ASSELSTINE: That's right.

MR. EISENHUT: And because of that and the complexity of the numbers, the Staff would prefer to respond in writing to the Commission if you'd want to go into the detailed numbers that were gone by here real quickly.

One other thing, so we didn't leave the Commission with the wrong impression --

COMMISSIONER BERNTHAL: Darrell, I think, though, to make clear what you're saying here, I gather from the number you quoted, that the judgment of the Staff at this point is that those numbers of 1 in 12 or 1 in 25, whatever they were, coremelt probability for the life of the plant, are somewhere between 10 and 100 times too high. Is that a fair statement?

MR. EISENHUT: I think that's correct. I think the number that sticks in my mind, as I said, is something like 1 in 30,000, the chance of a coremelt per year.

COMMISSIONER BERNTHAL: Right.

MR. EISENHUT: As our best estimate. And, of course, the early fatality number would be less than that.

COMMISSIONER BERNTHAL: Certainly.

COMMISSIONER ASSELSTINE: All this is still a matter that's --

MR. EISENHUT: It's a matter that is in adjudication before the Appeal Board, and we would prefer to go back, since all the numbers were -- and address them in writing.

COMMISSIONER BERNTHAL: But there is no changing the fact that it is in a higher population density area, and one has to simply flatly recognize that. But the question is whether the plant is adequately safe, and I take it it is your judgment that the plant is adequately safe, given the population density of that area.

MR. EISENHUT: That is correct. In fact, that is why we went to the extra level of requiring a full PRA evaluation, looking at additional design features that might be in the plant, and there are additional features in the plant to accommodate the situation.

COMMISSIONER ROBERTS: Go ahead.

MR. EISENHUT: The other issue I wanted to clarify to make sure we didn't leave you with the wrong impression related to the Yoh Security guards. The OI investigation on Limerick has been completed. It was summarized in the status memorandum to the Commissioners, dated August the 2nd. The investigation did not disclose evidence that any of the Philadelphia Electric personnel were involved.

The Yoh Security situation, with respect to the Yoh Company, we felt was resolved on Limerick in that the situation had been corrected. The overall situation, therefore, on Limerick we feel satisfies our requirements.

We are continuing the evaluation of the Yoh matter, as discussed in Ben's August 2nd memorandum.

COMMISSIONER ROBERTS: Further questions?

COMMISSIONER ASSELSTINE: No.

COMMISSIONER BERNTHAL: No.

COMMISSIONER ROBERTS: All right. You have heard the Staff's presentation, the Licensee and Intervenor.

All in favor of allowing the Licensing Board's Fourth Partial Initial Decision to become effective, thus authorizing the issuance of a full power license for Limerick, Unit 1, indicate by saying aye.

Aye.

COMMISSIONER ASSELSTINE: Aye.

COMMISSIONER BERNTHAL: Aye.

COMMISSIONER ZECH: Aye.

COMMISSIONER ROBERTS: All opposed?

[No response.]

COMMISSIONER ROBERTS: All in favor of issuing the order which you have all seen proposed by the Office of General Counsel, indicate by saying aye.

Aye.

COMMISSIONER ZECH: Aye.

COMMISSIONER BERNTHAL: Aye.

COMMISSIONER ROBERTS: Opposed?

COMMISSIONER ASSELSTINE: No. While I agree with the conclusion of the order, I have some problems with the substance of the order, and I will have just a couple of

sentences to stick in the order that just lays out the areas where I have a few problems.

COMMISSIONER ROBERTS: Adjourned.

[Whereupon, at 12:35 p.m., the meeting was adjourned.]

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

Name of Proceeding: Discussion/Possible Vote on Full Power Operating License for Limerick

Docket No.:

Place: Washington, D.C.

Date: August 8, 1985

were held as herein appears and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission.

(Signature) Ann Riley

(Typed Name of Reporter) Ann Riley

Ann Riley & Associates, Ltd.

8/8/85

SCHEDULING NOTES

TITLE: DISCUSSION/POSSIBLE VOTE ON FULL POWER OPERATING LICENSE FOR LIMERICK

SCHEDULED: 10:30 A.M., THURSDAY, AUGUST 8, 1985 (OPEN)

DURATION: 1-1/2 HRS

SPEAKERS:

- NRC STAFF
- PHYLLIS ZITZER, PRESIDENT LIMERICK ECOLOGY ACTION (5 MIN)
- J. L. EVERETT, CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER

  VINCENT BOYER, SENIOR VICE PRESIDENT FOR NUCLEAR POWER (PHILADELPHIA ELECTRIC COMPANY)

COMMISSION BRIEFING

LIMERICK UNIT 1

FULL POWER LICENSE

AUGUST 1985

CONTACT:
R. E. MARTIN
X24937

BRIEFING OUTLINE

* LICENSEE/PLANT BACKGROUND
* SELECTED ISSUES
* CONSTRUCTION OVERVIEW
* LOW POWER LICENSE OVERVIEW
* MANAGEMENT PERSPECTIVE
* INVESTIGATIONS
* 2.206 PETITIONS
* CONCLUSION

LICENSEE/PLANT BACKGROUND

* LICENSEE – PHILADELPHIA ELECTRIC COMPANY
  - SOLE OWNER AND OPERATOR OF LIMERICK GENERATING STATION
  - OPERATOR OF PEACH BOTTOM UNITS 2, 3 FOR OVER 10 YEARS

* PLANT
  - GE, BWR/4, MARK II, 3293 MWT, 1092 MWE *(GROSS)* SIMILAR TO SUSQUEHANNA UNITS 1 AND 2
  - A/E AND CONSTRUCTOR – BECHTEL

* SITE
  - ABOVE AVERAGE SITE POPULATION FACTOR
  - LOCATED ON SCHUYLKILL RIVER IN MONTGOMERY AND CHESTER COUNTIES, PENNSYLVANIA
  - NEAREST TOWN – POTTSTOWN *(1.7 MILES, POPULATION 23,000)*
  - 21 MILES NORTHWEST OF PHILADELPHIA

SELECTED ISSUES

* FSAR REVIEW
  - FIRE PROTECTION
  - ENVIRONMENTAL QUALIFICATION
  - LOW-LEVEL WASTE STORAGE
  - STAFFING

* TECHNICAL SPECIFICATIONS

* SEVERE ACCIDENT RISK ASSESSMENT

* EMERGENCY PREPAREDNESS

* SUPPLEMENTARY COOLING WATER

EMERGENCY PREPAREDNESS

* ON-SITE EP REVIEW COMPLETED

* FULL PARTICIPATION EXERCISE JULY 25, 1984
  - SUPPLEMENTAL AND REMEDIAL EXERCISES -
    NOVEMBER 20, 1984, MARCH 7, APRIL 10 AND 22, 1985

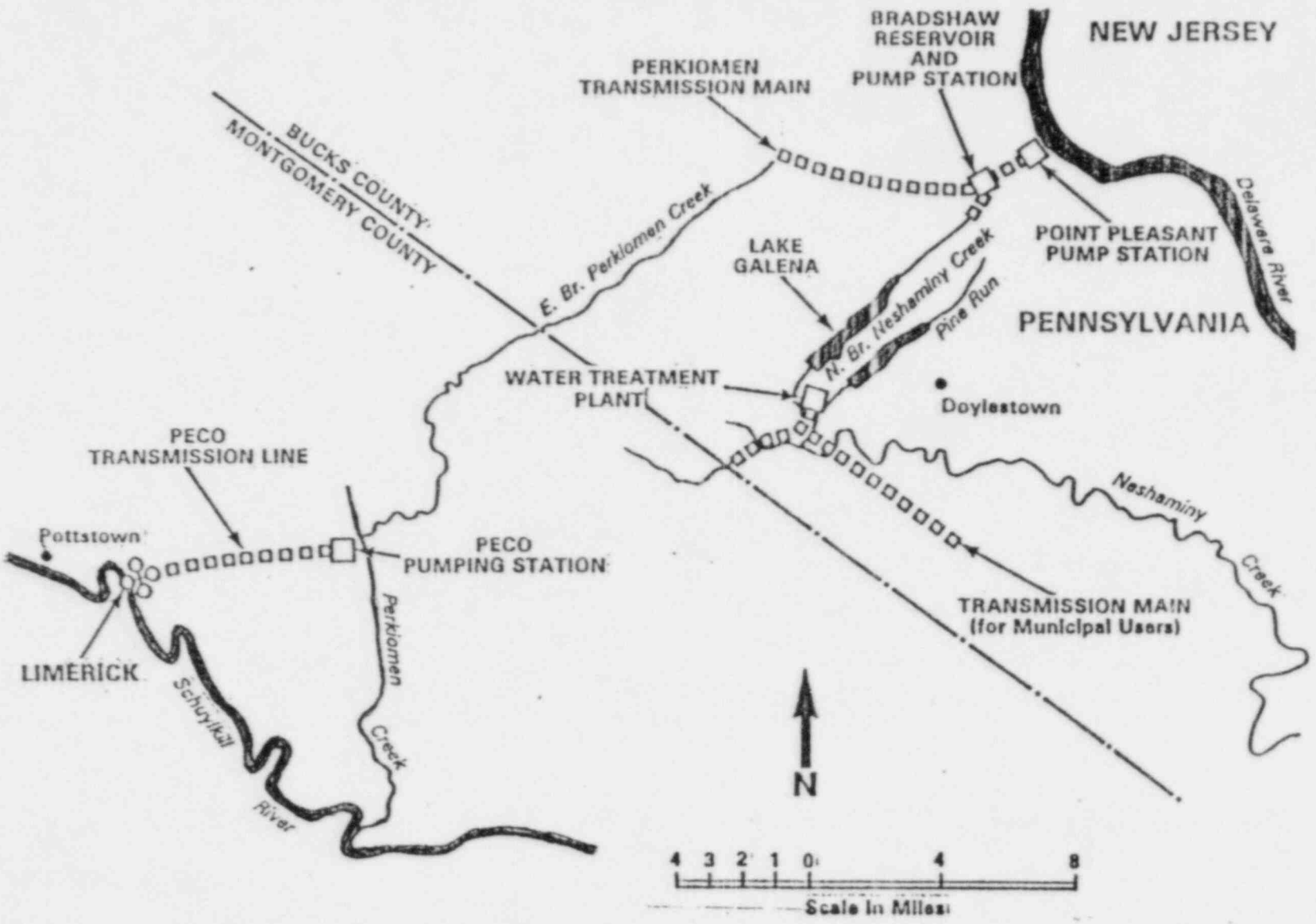
* FEMA REPORTS OF ADEQUATE PLANNING AND PREPAREDNESS ISSUED MAY 21 AND 30, 1985

* STAFF SER ON OFFSITE ISSUES - JULY 1985

* ASLB PARTIAL INITIAL DECISIONS - MAY 2, AND JULY 22, 1985

* STAFF SER ON EXEMPTION FOR FULL PARTICIPATION EMERGENCY EXERCISE - AUGUST 1985

SUPPLEMENTARY COOLING WATER SYSTEM
(POINT PLEASANT DIVERSION PROJECT)



SLIDE 6

REGIONAL EVALUATION

* CONSTRUCTION OVERVIEW

* LOW POWER LICENSE OVERVIEW

* MANAGEMENT PERSPECTIVE

CONSTRUCTION OVERVIEW

* CONSTRUCTION - READINESS ASSESSMENT REPORT *(10-25-84)*

* QA - SPECIAL ASSESSMENT OF THE QUALITY OF CONSTRUCTION *(10-25-84)*

* ALLEGATIONS - NUMBER, NATURE, AND ANALYSIS

* SALP RESULTS - FOUR REPORTS ON CONSTRUCTION ACTIVITIES

LOW POWER LICENSE OVERVIEW

* PREOPERATIONAL AND STARTUP TEST PROGRAM
  - PERFORMANCE OF TEST REVIEW BOARD
  - TURBINE ROLL CONDUCTED SATISFACTORILY
  - NO SIGNIFICANT HARDWARE PROBLEMS IDENTIFIED DURING TEST PROGRAMS

* ASSESSMENT OF OPERATIONS
  - OPERATING STAFF
  - INITIAL CONCERNS REGARDING PERSONNEL ERRORS

MANAGEMENT PERSPECTIVE

EFFECTIVENESS OF MANAGEMENT ATTENTION AND INVOLVEMENT TOWARD NUCLEAR SAFETY

* LICENSEE STRENGTHS INCLUDE:
  - LIMERICK SITE STAFF
  - ENGINEERING STAFF
  - OVERSIGHT OF CONSTRUCTION CONTRACTORS

* LICENSEE WEAKNESSES INCLUDE:
  - OVERSIGHT OF SERVICE CONTRACTORS

SALP SUMMARY

FUNCTIONAL AREA	12/1/82 TO 11/30/83	12/1/83 TO 11/30/84	TREND
1. CONSTRUCTION ACTIVITIES	1*	1	CONSISTENT
2. PREOPERATIONAL AND STARTUP TESTING	2	2	IMPROVING
3. OPERATIONAL READINESS AND PLANT OPERATIONS	2	2	IMPROVING
4. RADIOLOGICAL CONTROLS	NOT ASSESSED	2	IMPROVING
5. FIRE PROTECTION/ HOUSEKEEPING	NOT ASSESSED	1	IMPROVING
6. EMERGENCY PREPAREDNESS	NOT ASSESSED	2	IMPROVING
7. SECURITY AND SAFEGUARDS	NOT ASSESSED	3	IMPROVING
8. LICENSING	1	1	CONSISTENT

** EXCEPT 2 IN INSTRUMENTATION AND CONTROL AND IN ENGINEERING/DESIGN CONTROL*

CONCLUSION

STAFF CONCLUDES THE LICENSEE MEETS ALL THE REQUIREMENTS FOR ISSUANCE OF A FULL POWER LICENSE

12/82

TRANSMITTAL TO: ☒ Document Control Desk, 016 Phillips

ADVANCED COPY TO: ☐ The Public Document Room

DATE: 8/13/85

FROM: SECY OPS BRANCH

cc: OPS File
C&R (Natalie)

Attached are copies of a Commission meeting transcript(s) 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. Existing DCS identification numbers are listed on the individual documents wherever known.

Meeting Title: Dir/Pow. Vote on Full Power Operating License for Limerick

Meeting Date: 8/8/85 Open X Closed ___

Item Description:	Copies Advanced To PDR		DCS Copies (1 of each checked) Original Document	May be Dup*	Duplicate Copy*
1. TRANSCRIPT ___ When checked, DCS should send a copy of this transcript to the LPDR for: w/scheduling notes + viewgraphs	1	*	1	___	___
2.	___	*	___	___	___
3.	___	*	___	___	___
4.	___	*	___	___	___

(PDR is advanced one copy of each document, two of each SECY paper.)

*Verify if in DCS, and Change to "PDR Available."