NUCLEAR REGULATORY COMMISSION

ORIGINAL

COMMISSION MEETING

In the Matter of: DISCUSSION AND VOTE ON FULL POWER OPERATING LICENSE FOR SALEM

PUBLIC MEETING

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

DISCUSSION AND VOTE ON

FULL POWER OPERATING LICENSE FOR SALEM

PUBLIC MEETING
Nuclear Regulatory Commission

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

Wednesday, January 14, 1981

The Commission met, pursuant to notice, at 10:05 a.m.

BEFORE:

JOHN F. AHEARNE, Chairman of the Commission
VICTOR GILINSKY, Commissioner
JOSEPH M. HENDRIE, Commission
PETER A. BRADFORD, Commissioner

STAFF PRESENT:

L. BICKWIT, General Counsel
M. MALSCH, Office of General Counsel
J. HOYLE, Secretary
H. DENTON, NRC
E. CHRISTENBURY, NRC
J. KERRIGAN, NRC
D. EISENHUT, NRC
L. NORHOLM, NRC
V. NOONAN, NRC
D. ROSS, NRC
D. VOLLMER, NRC
J. KNIGHT, NRC
D. VASALLO, NRC
J. DICKIE, NRC
R. PRIEBE, NRC
S. SCHWARTZ, NRC
J. DICKIE, FEMA

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P R O C E E D I N G S

CHAIRMAN AHEARNE: The business the Commission meets on this morning is to consider a report from the Director of NRR regarding the Salem No. 2 station. At an earlier stage we had addressed previous issues with respect to Salem. We now come to address a full power license proposal.

Len, are we under any kind of restriction?

MR. BICKWICK: No. This is an uncontested matter. It is contemplated that you would always have free access to the staff on those matters.

CHAIRMAN AHEARNE: We have received a small billet-doux from the staff regarding Salem and I am sure that there are many interesting items in it that some of us may have missed, or all of us have missed. I have hopes that this morning will at least some of the concerns.

Let me briefly mention the ones I have, so that I would like in your presentaton at least you address those and perhaps some of my colleagues would care to point out the areas that they are interested in, the emergency plan, the operators, the competence of the company, the block wall and the role of I&E.

Does anyone else have anything that they would care to say?

(No response.)

Harold.

(First slide.)

MR. DENTON: I have with me this morning at the table on my left Janice Kerrigan, the Project Manager for Salem II, Darrell and on my right Leif Norholm, the Resident Inspector at Salem. We did plan to cover I think all of the areas you mentioned.

The Commission did issue a low-power license for this plant in April of last year. They completed the low-power testing in August. Since that time these types of issues and others have been partially the cause for our not completing the safety review before this date. We now have resolved to the satisfaction of staff all of the issues except those relating to emergency planning.

So, in our view, the only impediment to the issuance of a full power license would be the completion of the emergency planning plan and the execution of a drill. That drill is not expected to be performed until about March.

We have in the audience today a representative of FEMA and we will ask him to discuss the status of emergency planning in the two affected states at an appropriate time in the agenda.

Let me turn it over then to Janice to go through our review and we will be sure to hit the areas you have

identified.

CHAIRMAN AHEARNE: All right.

MS. KERRIGAN: If we could have the second slide.

(Slide.)

This outlines what we planned on discussing for this meeting.

As Dr. Denton said, we have finished our review for the Salem 2 full power license and we will be recommending issuance once the emergency preparedness items have been completed.

Basically we are going to cover some non-TMI issues and TMI issues. I think all of the issues that you requested will be covered.

First, we would like to go through the actions that have been completed by the licensee since the issuance of the low-power license on April 18th.

(Slide.)

This slide summarizes the major actions that have been taken by the licensee. I will draw your attention to the low-power testing program that was initiated and will be completed prior to operation above five percent power.

I would if Leif could give a brief status of the plant as it is today.

MR. NORHOLM: Right now the plant is in cold shutdown and has been since August 30th at the completion of

the low power test program. The only portions of that program remaining at to do some training for a few additional operators, but they are essentially ready for power ascensions above five percent.

CHAIRMAN AHEARNE: Leif, are you the Salem resident or the Salem 2 resident?

MR. NORHOLM: I am the Salem generating station resident of both plants.

CHAIRMAN AHEARNE: Do you have an assistant there?

MR. NORHOLM: Yes, I do. He has been there for a year.

CHAIRMAN AHEARNE: The two of you cover the two plants?

MR. NORHOLM: That is correct.

(Slide.)

MS. KERRIGAN: This is a summary of the low power testing program that was completed by Salem. Essentially the program is identical to the program that was completed by North Anna. The tests that were completed are listed on the slide. We were basically happy with the program.

As Leif mentioned, they will be completing some of the training portion of the program prior to exceeding five percent power.

CHAIRMAN AHEARNE: In going through these were there any anomolous results or any unusual problems that

occurred in the sense of either equipment or procedures?

MS. KERRIGAN: Not that I am aware of.

Leif, are you aware of any?

MR. NORHOLM: No, there were not.

MS. KERRIGAN: No. It essentially went very smoothly.

(Slide.)

On the next slide are listed the main topics that we will be discussing. We have broken it into the non-TMI issues, which were issues that were either left over from fuel load or new issues that have come up. We left a category "Other" to address any other issues that you would like to discuss. Then we will cover the TMI items.

(Slide.)

The first major topic that we would like to talk about is equipment qualification. The PSE&G program is essentially complete except for aging.

The staff has conducted three audits on Salem. They are much further along than any of the other near-term OLs that you have heard about.

The first audit, essentially major program deficiencies were identified in that audit. We feel that that is attributed mostly to a lack of communication between the staff and the licensee. The licensee did not have a full understanding of what was expected under this item. So

they have resubmitted their entire program, redid their entire program and came in with that program. The staff went back out for another audit and was happy with the results of that.

They audited five percent of the items and essentially came up with the same conclusions as the Salem station and recommended at that time that they should be allowed to go to full power.

Since that time, since the SER was issued, we have gone out and done our full audit, the 20 percent audit. We don't have the full results back from that yet, but the preliminary results do indicate that the conclusions that was drawn from the five percent audit was not changed.

CHAIRMAN AHEARNE: What was the conclusion?

MS. KERRIGAN: The conclusion was that Salem should be allowed to go to full power. There were some deficiencies identified in that second one.

CHAIRMAN AHEARNE: The deficiencies, can you put some number on it?

MS. KERRIGAN: I think I will let Vince Noonan give you a brief rundown of the numbers.

(Slide.)

MR. NOONAN: Vince Noonan, Division of Engineering.

Before I go into this slide I would like to point out that in the SER we talk about a total of 60 types of

items that the licensee has identified that are required for a safe shutdown of the plant. Of those 60 we basically have five types that the licensee says are qualified. So those have been placed aside and we are looking at that to see whether or not we agree with that or not.

There are 24 types that do not appear in this chart that strictly are aging problems and that, as Janice pointed out, will be completed by the 1st of February. Our staff has looked at that program, gone through as much detail as they could and we are satisfied that that will be done by the 1st of February.

CHAIRMAN AHEARNE: Vince, when you say they are aging problems, do you mean with respect to the rest of the qualification you are satisfied and it is just the aging is the open item?

MR. NOONAN: It is the only outstanding issues to be resolved. So I did not put that on this chart since that is the only item left to go.

COMMISSIONER GILINSKY: Those have been audited?

MR. NOONAN: They have been audited as much as could be at this point in time. It will be done in a few more weeks so it is basically a pretty complete audit of the aging requirements.

We have then what we call 31 outstanding items. In the February 1st SER we will be carrying these as items

that are unresolved and we need further work with the licensee.

The first type is titled "Existing Analyses Indicate Qualification Not Required." There are eight types of equipment totaling 93 actual items.

COMMISSIONER GILINSKY: Why were those on the list at all?

MR. NOONAN: What the licensee has done is has done some type of analysis saying that because of either the location of the equipment or it is not exposed to the actual environment right now or other means of getting the plant shut down. Since they appeared on this first list he then provided us with an analysis that says they are not really required. We haven't fully resolved that.

COMMISSIONER GILINSKY: It shouldn't have appeared on the original list.

MR. EISENHUT: It is sort of semantics. You know, the way we did this is we started with everything. What this really is, and you will see this in a couple of other categories, they are really disappearing because it shows that they shouldn't have been on the list in the first place, or the utility is making some design changes so they no longer have to be on the list, some of these kinds of things.

This is sort of a completeness accounting scheme.

I reiterate the point, and Vince can correct me, we did the two reviews here. We did the review which is sort of what we did on Sequoyah, North Anna and down the line, that is, the review we were doing up until February 1. But at some point recognizing that February 1 is very, very close, we have the February 1 SERs to do per the Commission's order.

This is the first plant where we have completed the February 1 type of review. This is sort of an accounting scheme to account for all of the outstanding issues, all of the issues, all of the technical subjects which I believe is about 50 percent. There were about 60-some items.

MR. NOONAN: Sixty items, right.

MR. EISENHUT: This is just trying to be from a completeness standpoint. Otherwise, in the number games they always fall in the cracks.

COMMISSIONER BRADFORD: There is a semantic problem I think with that slide, though, because where you say 31 outstanding items you are not using the word "item" the same way you are in each of the subcategories.

MS. KERRIGAN: That is right.

MR. EISENHUT: Well, we are not using the word "outstanding" right either.

(Laughter.)

MR. EISENHUT: It is about 31 out of about 60 or

so types of equipment.

COMMISSIONER BRADFORD: That is the point, items on top is synonymous with types of equipment as it appears down through here.

MR. EISENHUT: In fact, as you can see from the very first item, they are no longer outstanding items. These were the outstanding items before and this is a moving target also. Last week's review has superseded this slide somewhat, but you are certainly right.

MR. NOONAN: This is really an accounting type of sheet. The licensee has identified 60 types of equipment necessary for a shutdown. What we do is we go through and make sure we can account for every one of these.

The first group or the first eight types, he has provided us with these analyses. The staff has looked at them and they are satisfied with them. They quote 93 actual pieces of equipment.

There are nine types of equipment to be replaced. These total a total of 82 actual pieces of equipment.

There are some design changes that are being made to preclude qualification of equipment and these are two types which include eight actual items.

CHAIRMAN AHEARNE: Is there a date by which that is to be done?

MR. NOONAN: These have basically already been

completed. These are mainly changes in wiring of the particular circuits to eliminate these pieces of equipment.

We have one design change that has been completed that is no longer a basically required qualification. It satisfies the qualification. There are a total of four of those items.

There are procedural changes that have been made to preclude need for qualification. These are six types of those types of equipment and there are 23 actual items.

CHAIRMAN AHEARNE: Are you saying, Vince, that the first item with eight types and the last item with six types, the section was two and one, so the total of 17, are ones that either no longer have a need or else have been satisfied?

MR. NOONAN: They have been satisfied. The staff has fulfilled about 50 percent looking through the data sheets now to make sure they agree with all this. They have done their site review. What they looked at at the site they agreed with. We will make sure we go through a hundred percent of all these items. This about half way through that part of it.

MS. KERRIGAN: The last one on there, we have a licensed condition on the licensee to complete those procedural changes before exceeding five percent power.

MR. NOONAN: That is right. At this point in time

we are not saying they are completely finished because the staff has not completed its total review.

CHAIRMAN AHEARNE: On the second item which are the nine to be replaced by June 30th, you have reached some sort of conclusion that having them in there through June 30th is not necessary?

MR. NOONAN: Yes, sir. There has been justification provided by the licensee in each case. The staff has reviewed a hundred percent of those justifications. They have concluded that the total replacement of those items will actually occur and that the justification is sufficient. These are basically the items that have been identified to the Commission earlier, Barton transmitters, limit switches, those types of equipment.

(Slide.)

This is the remainder of the 31 types. "Provide Qualified Equipment Or Relocate to a Non-Harsh Environment By June 30, 1982." There are three types of this equipment totaling 30 items.

There is confirmatory testing to be performed on one type of item. There are actually three pieces of equipment. This is necessary because this piece has been qualified but they are going back and checking to make sure that the actual materials and the design of this piece of equipment is indeed the same as the one that has been

qualified. At that point in time they could not prove it yet.

They have one qualification schedule for one type of equipment which will be three actual items. That will be done by January 1st, 1982.

CHAIRMAN AHEARNE: I gather for these five also the staff has reached a conclusion that they similarly are satisfied and are comfortable with their plant operating with those items?

MR. NOONAN: Yes, sir, in all these cases they have.

COMMISSIONER BRADFORD: Vince, what is actually happening with regard to that second item from the bottom? You say the piece of equipment itself is qualified?

MR. NOONAN: It had been qualified. The model number actually changed. When the staff looked at the qualification report and the piece of equipment that was in the plant there were some different model numbers. The licensee has gone back to verify that this is exactly the same piece of equipment that was qualified.

COMMISSIONER BRADFORD: I see. They are not sure it is the same piece of equipment?

MR. NOONAN: No, they are not. They are checking it right now and they have said they will do confirmatory tests to be completed by '81.

COMMISSIONER BRADFORD: If it is a different piece of equipment?

MR. NOONAN: That is right.

MS. KERRIGAN: Do we have any more questions of equipment qualification?

CHAIRMAN AHEARNE: Peter?

COMMISSIONER BRADFORD: This is essentially the information that will be in the SER on equipment qualification?

MR. NOONAN: This will be specified in much more detail in the SER.

COMMISSIONER BRADFORD: But you don't expect significant changes between ---

MS. KERRIGAN: --- the five percent audit and the twenty.

MR. NOONAN: No, sir.

COMMISSIONER BRADFORD: Basically the difference between hard data and that which you are still working into the SER is the difference between the five percent audit and the 20 percent audit?

MR. NOONAN: That is right. Basically what we are looking now is just going through the remaining of the summary sheets to see whether or not we find anything in the summary sheets that would negate any finding we have made so far.

(Slide.)

MS. KERRIGAN: The next subject that we would like to talk about is GDC-51 which essentially requires a non-brittle containment pressure boundary. The reason why this issue even came up is we have always assumed that compliance with the ASME code assured compliance with the GDC-51. As we looked into it in more detail it turned out that Salem was designed to the 1968 version of the code which did not require fracture toughness testing which the staff felt was necessary.

So we reviewed Salem against the later versions of the code which did require fracture toughness testing. We reviewed all the components and we found one that had no test data, no fracture toughness data. That was the feedwater lines. So we went back and we were able to deduce from the thermal history of the pipe that the material was ductile and therefore met GDC-51. So we concluded that it complies with GDC-51.

While we were doing the review we also came across in the feedwater lines some stop-check valves. Simple check valves are explicitly prohibited by GDC-57. Salem provided justification for those valves and we gave them a temporary exemption from GDC-57 until they can either show that the stop-check valves would meet GDC-57 or put a motor operator on those valves.

COMMISSIONER GILINSKY: Can you explain that?

MS. KERRIGAN: All right. Which part, the GDC-51 part of the ---

COMMISSIONER HENDRIE: Are they stop-checks or ---

MS. KERRIGAN: They are stop-checks. We are verifying that they are accessible. Simple checks are forbidden. If the stop-checks are accessible during any event then they would not be forbidden. We are still trying to confirm that those stop-checks are accessible.

MR. DENTON: Why don't we have Dennie Ross describe GDC-57 and our interpretation of it and how it applies in this case.

MR. ROSS: I would like to use a simplified picture.

(Slide.)

This shows one steam generator typical of four. There is a vertical line that demarcates the containment boundary. Just to the right of the containment boundary in the area labeled "penetration area" is a check valve with a little symbol coming out of the top which is supposed to denote a hand wheel. The valve is labeled seismic class one just to the right of the dotted line and that is the seismic class one interface.

Of course, the main feedwater flow is normally from right to left going through the check valve which of

course during full power operation would be fully opened. Should the main feedwater stop or should a significant rupture occur to the right then there would be a reverse pressure gradient and the check valve should close. The operator can go and turn the hand wheel and effect a positive closure. So as far as the construction of the valve itself, without describing the means of operation, there is a means of assuring a positive closure by turning the wheel.

The GDC-57 says a simple check isolation feature at this point in the plant design is not acceptable. What GDC-57 says is acceptable is one of three things. It could be a motor operated valve from the control room, or manually, or it could be an automatic isolation valve that would actuate, say, on a containment isolation actuation signal.

The intent is for that remote hand wheel to be replaced in due course with a motor which would have a controller signal in the control room.

COMMISSIONER GILINSKY: What is the intent of GDC-57?

MR. ROSS: I said the intent of our licensing action is to be put that in.

COMMISSIONER HENDRIE: It is a containment isolation provision. For instance, on lines that go through

the containment and are open to the primary pressure boundary and, hence, in case of a LOCA or connected to the accident and so on you require isolation valves both inside and outside the containment wall. Again, simple checks won't do.

This is a system which is in principle at least closed inside the containment. So in order for anything to come out this system from the radioactive side of things you have to have a break into that secondary system. So in this case you get away with one isolation valve outside of containment, but again not simple checks. The aim of not having simple checks acceptable as the isolation valves is to have a more positive closure function available.

I am surprised they set these up with hand wheels, frankly. Did they explain why? You know, I used to lecture on this point at MIT long enough ago so that Salem engineers should have been attending before they designed the damn system.

(Laughter.)

MS. KERRIGAN: They do have two automatic redundant isolation valves way upstream of these.

COMMISSIONER HENDRIE: I see.

MS. KERRIGAN: But they are very far away from the containment. We didn't like them that far away and we wanted them to bring it in closer to this check valve.

MR. DENTON: The issue is confined to just these four valves in the feedwater line. So it is just the four. The kind of scenario that would be of concern to the staff is one in which there is a steamline break perhaps downstream here so that you open up this normally closed secondary system to begin with and that somehow this results in core damage and the release of fission products inside the vessel. This leaks through the steam generator at some leakage and gets through these valves and you have got a direct path. That is the kind of thing that GDC-57 is intended to prevent.

The solution I think they have proposed, Janice, is to replace these manual operated valves and to put motors on these four ---

MS. KERRIGAN: During the first refueling.

MR. DENTON: --- during the first refueling. Our look at the details of it and the type of layout leads us to conclude that there is no undue risk associated with permitting that operation in the interim.

CHAIRMAN AHEARNE: Are those the main valves or the aux feed valves that you are talked about putting the motors in?

MR. ROSS: The auxiliary feed line is at the top and the main is at the bottom.

CHAIRMAN AHEARNE: I know, but you said just

four. That would be eight.

MR. ROSS: The four main feed lines, one per steam generator, right.

CHAIRMAN AHEARNE: And also the aux feed?

MR. ROSS: I would have to look at my other diagram which is more complex which if Figure 1.

(Slide.)

MR. DENTON: I don't know the answer.

MR. ROSS: Figure 1 is a little more elaborate of Figure 2. There are a number of auxiliary feedwater valves. The source is coming of course from the three pumps.

COMMISSIONER HENDRIE: I think the answer is eight.

(Laughter.)

MR. ROSS: There are quite a few more auxiliary feedwater control valves.

COMMISSIONER HENDRIE: Well, yes, but this shows both the motor driven and turbin driven aux feeds coming down through that stop-check into the main feedwater lines. So if that stop-check is converted to motor driven on signal from the control room, it is the 11AF23 valve, just the same as 11BF22.

MR. ROSS: But the isolation criteria for this system is not the same because safety systems' isolation criteria take on a different interpretation. Obviously you don't want to isolate these.

COMMISSIONER HENDRIE: I see.

MR. ROSS: It is the same as ECCS isolation criteria.

COMMISSIONER HENDRIE: We are back to four.

MS. KERRIGAN: Yes, it is four.

(Slide.)

We also examined fire protection and Salem meets all of our fire protection in the staff criteria. All of the outstanding items will be completed prior to operation above five percent power.

Salem 2, although not covered by the rule, has committed to implement the new Appendix R items on the same schedule as Unit 1 to keep the units identical. So they are in very good shape as far as fire protection goes.

Any questions?

(No response.)

We also looked at some other items that could be classified as non-TMI-1 which are the masonary walls. Salem does have some masonary walls and they plan on completing their modifications prior to operation above five percent power.

CHAIRMAN AHEARNE: Could you expand a little bit on why you raised the masonary walls?

MS. KERRIGAN: In response to the bulletin Salem did identify some walls that are block walls that had some

reinforcement bars and were not constructed according to design. They have proposed some modifications and those modifications will be completed prior to operation above five percent power.

Would you like more details?

CHAIRMAN AHEARNE: Yes.

MR. DENTON: I think so far in our survey we have found some 5,000 masonary walls inside either auxiliary buildings or containments about half of which may have something hung on them of significance or may be in a position such as they could fall on something significant.

CHAIRMAN AHEARNE: This is clearly in all plants and not just Salem?

MR. DENTON: That is right. It is requiring a lot of effort to look at the design criteria for masonary walls and what they may or may not have supporting them.

I will turn it over to our engineering group to talk about Salem specifically.

(Slide.)

MR. VOLLMER: In performing their response to IE Bulletin 80-11 they found about ten walls which would not meet their criteria. There were various reasons for this. In some cases the reinforcing rod was missing. In some cases there were voids in the blocks, meaning that they were not filled with grouting. In some cases they were

apparently not designed to meet natural phenomena. So it was a design deficiency. So it was a combination of both design and actual construction deficiencies.

Now, in a meeting with Public Service we proposed a condition in the license in their response to Bulletin 80-11 that they would prior to going above five percent power complete the strengthening of the walls to their original design criteria.

CHAIRMAN AHEARNE: Did they have a design criteria for the walls?

MR. VOLLMER: Well, the design criteria for the walls would be basically meeting ACI codes.

CHAIRMAN AHEARNE: There are code requirements for masonary walls?

MR. VOLLMER: The codes are not specific for masonary walls but they are design requirements which if applied to masonary walls in a proper way we feel could provide the level of protection needed in a masonary wall.

CHAIRMAN AHEARNE: Dick, what I am trying to get at is are there clear criteria that one would say, yes, here are the criteria and we agree that those are appropriate?

MR. VOLLMER: These criteria are not clear and we are in the process of developing criteria that we would hope to be used across the industry in this problem.

MR. DENTON: I think again it is a level of detail

that normally our review didn't extend into. We looked at the main floors and load bearing walls. You know, it is a question of the scope of our interest. We have just gotten into masonary walls recently.

CHAIRMAN AHEARNE: But if there is safety related equipment on it don't you look at it?

MR. DENTON: Well, we will now, but you know we can't look at everything with the staff we have. There are 3,000 walls.

(Laughter.)

MR. VOLLMER: These things came about from a combination of things. Again, one was construction deficiencies. In some cases we find that these walls were not intended to support safety related equipment or to be close to safety related equipment but in field construction and so on they ended up that way. So it is quite a mixed bag of tricks and we are trying to develop a uniform approach on an expedited basis to find out what the problems are and to implement a uniform action on response 80-11 across all the operating plants.

CHAIRMAN AHEARNE: Let me pick up though on something, if I can get back to you for a moment, Harold. Are you saying that you don't have any requirement that would cover how you mount safety related equipment?

MR. DENTON: Well, let me ask Jim to describe what

our criteria are in this area.

COMMISSIONER HENDRIE: You mean if you were building a new one or if you are going back into a finished plant and saying, now, will this wall fall down and pull the instrument down?

MR. DENTON: The latter case.

COMMISSIONER HENDRIE: The latter case I expect is more difficult.

MR. KNIGHT: I think, if I may get to the thrust of your question, we certainly have, particularly in the review of Salem, criteria in mind by which we can judge the adequacy of what they have done. As Dick noted, there are codes, the ACI codes and the uniform building codes that do address masonary construction. Typically they don't address it to perhaps the level of confidence, if I may use that term, that we would require in nuclear application.

MR. DENTON: It is an issue which was not covered in our standard review plan. It was not customarily a part of our review to look at masonary walls. It was a realization that they were quite often walls put up.

CHAIRMAN AHEARNE: Harold, I am not trying to say that you should have looked or you should look at all masonary walls. In that connection I was trying to see whether we had any requirement on if you use a masonary wall in such a way that if it fails it takes with it some systems

which are very important.

MR. DENTON: Well, we have developed such criteria in specific cases. Remember it was a contested case over masonary walls which was what got us into this issue and led to the issue of the bulletin. Jim does have criteria now for judging the responses that we are getting in, but we didn't have before this began any definitive criteria.

CHAIRMAN AHEARNE: But when you look at what Salem is doing you do have criteria?

MR. DENTON: Yes.

CHAIRMAN AHEARNE: How extensive is the situation at Salem? How many walls are in question with safety problems?

(Slide.)

MR. KNIGHT: There is a summary of the situation at Salem. We are talking ten walls total.

COMMISSIONER BRADFORD: With regard to the phrase "the licensee reported ten walls" didn't we in fact have to find some of these walls?

MS. KERRIGAN: Maybe Leif could talk about that a little bit.

MR. NORHOLM: The response to the bulletin came in two parts, one after 60 days and the other after 180, after the complete evaluation was done. In the initial response the licensee had not identified that item 1-A on the slide,

safety related piping attached to the wall. That was identified by us on site. A subsequent response identified that as a potential problem also. The final 180-day response has all the walls in the plant which are near safety related equipment and does provide the analysis and the corrective actions taken for both units.

The purpose of the 60-day response was to get an initial look at what the potential problems might be.

COMMISSIONER BRADFORD: The first response identified nine walls then?

MR. NORHOLM: They did identify the walls. The only wall missing in the first response was the truck bay wall. That came in later. So the walls were identified and an initial evaluation considered them not to be a problem but they did not observe that the safety-related piping was attached to the wall. That is the only point at which safety related piping is attached to a wall in the plant. The issue on all the remaining walls is proximity to safety related equipment.

CHAIRMAN AHEARNE: The license condition that you were going to impose is what?

MS. KERRIGAN: It is that prior to five percent they will complete the strengthing program and then by first refueling the staff will have completed its review and if there are any additional modifications that we feel should

be backfit on the plant we will backfit them at that time.

MR. EISENHUT: I should point out that in the package we sent down, this is a slight change to the license condition. The license condition we sent down said that prior to five percent they had to do both of these things. Now we are saying prior to five percent they do the one thing and prior to the operation following the first refueling outage they resolve any differences between their criteria and our criteria as published in final form and then fix any deltas.

CHAIRMAN AHEARNE: And you modified it because?

MS. KERRIGAN: I had just made a misunderstanding with the reviewer. I thought that he meant everything by five percent and really he meant the first three and the last one by first refueling which is something that fell in the crack.

MR. KNIGHT: It might be worth commenting that we had the structural engineering staff at the site. We have reviewed the designs and reviewed the drawings. We have made a visit to the areas so we could see what the walls actually were.

The difference in the criteria we are talking about here is an incremental one. It a measure really of perhaps once again that extra step, that extra measure that we may require in, say, nuclear applications as opposed to

what would be acceptable for normal construction practices.

Said another way, when they complete the strengthing program that they have proposed there will be a very substantial increase in the seismic capacity of the walls such that there certainly is a high level of confidence that they would sustain the required earthquake loads.

Now, whether or not in the final application of criteria as a general measure to withstand scrutiny, if you will, without question, we require some slight additional increment. When we issue the final criteria we would expect them to meet whatever that final criteria turns out to be, but we are not proposing in any way that there be some significant deficiency allowed to go on for a period of time.

CHAIRMAN AHEARNE: Thank's, Jim.

COMMISSIONER BRADFORD: Let me ask again what I took was implicit in one of your earlier questions on this general subject. When you say that there are no criteria for masonary walls, the general design criterion says that safety related piping has to be seismically adequate and I presume that means the walls that support it as well as the piping itself. Is that criterion violated here?

MS. KERRIGAN: No.

COMMISSIONER BRADFORD: Why not?

MS. KERRIGAN: I think at one time we weren't sure

about the construction of the wall, but the modifications that the licensee will complete prior to five percent power will assure that that criteria isn't violated.

COMMISSIONER BRADFORD: But at the moment you are not sure that it is not?

MR. NORHOLM: That particular wall has been strengthened now.

MS. KERRIGAN: Yes.

MR. NORHOLM: It was the vital wall between the two units that had to be resolved in Unit 1 before they went back in service.

MR. DENTON: I guess to put it in context that while there might be a wall somewhere the chance of that wall being, you know, the nail that led to the lack of seismic capability of the plant is pretty remote. There aren't many walls and they are being strengthened.

We didn't have specific criteria like we have for the design of the containment and the main load bearing walls and it goes on and on and on about the design details. I was surprised to find the people had put any safety related equipment on or near these walls, but as we continually look deeper we turn these things up.

COMMISSIONER BRADFORD: I gather that the question certainly isn't unique to Salem in any case.

MR. DENTON: No. That is why the bulletin went to

all applicants. It is a big review by the staff for all of the plants.

COMMISSIONER BRADFORD: Tell me again on what kind of a schedule it requires that the walls be strengthened.

MR. DENTON: For Salem or for all plants?

COMMISSIONER BRADFORD: No, for all plants.

MR. DENTON: I don't recall the status for all plants.

Jim, do you?

MR. KNIGHT: The responses were due to the bulletin, the 180-day responses that gave the applicant's appraisal of the extent of the problem, in November. We are in the process now of reviewing those repsonses and they are fairly extensive. Out of some 69 we have made our way through some 47 of them.

The bulletin required that if seismic category one equipment or systems were determined to be in jeopardy as a result of the review performed by the applicant that their technical specification language, if you will, would be in force.

As far as our setting a schedule for repair of the walls, it is something that we would anticipate developing very shortly once we have had the benefit of our complete review.

MR. DENTON: We could brief you later on that. We

haven't really tabulated the numbers I gave of 5,000 total walls with about half of them having proximity or something on them or what. We are coming out with the results of the bulletin and we are not really yet decided on the complete course of action.

COMMISSIONER BRADFORD: I would be interested in that at a future date. For purposes of Salem you are satisfied that both units -- well, let's see, what about unit one?

MS. KERRIGAN: Unit 1 has completed all of their modifications and they are at 100 percent power now.

CHAIRMAN AHEARNE: Well, I gather what Leif pointed out is the reason that the A-wall is now strengthened is because in order for Unit 1 to go back up on power it had to be strengthened.

MR. NORHOLM: That is right.

MR. EISENHUT: We did a lot of interim fixes. Actually the bulletin that went out last year, the 180-day bulletin, there was actually iteration before that where we did a quick look at different plants. In fact, where there were some problems plants were being fixed. The 180-day letter then, the reason it was 180 days was because we had taken a preliminary look already and now we are sort of in the final fix-up stage. We sort of made a safety assessment quite early in the process.

MR. KNIGHT: A number of plants have already completed the modification of their walls as a result of the effort they performed under the bulletin.

CHAIRMAN AHEARNE: Go ahead, Janice.

(Slide.)

MS. KERRIGAN: On slide No. 9 the topic is shift staffing. What I show on this slide is the combined with both units operating numbers and the per-shift that is required. There are two SROs required per shift and four SROs required per shift.

They currently have licensed a total 11.

CHAIRMAN AHEARNE: Janice, when you say "required" which requirement is that?

MS. KERRIGAN: These are the requirements from NUREG 0737 and from an earlier letter dated -- I don't recall the date.

CHAIRMAN AHEARNE: NUREG 0737 requirements?

MS. KERRIGAN: Yes. Currently right now they are on three 12-hour shifts. They have enough people, both ROs and SROs to go to the four 12-shifts and they plan on going to four 12-hours shifts within the next two weeks. They are working on putting the people in the right box and making sure that Joe Smith has his time off, his vacation and things.

There was an exam taken last week. We do not have

the results of that exam back, but if everyone passes that exam they will be very close to the five 8-hour shift operation.

CHAIRMAN AHEARNE: I guess past percentages would lead one to conclude that probably everybody wouldn't pass the exam.

MS. KERRIGAN: Right. I think that their percentages are getting better. They record just around fuel load time with our new requirements on upgrading the exam content. Their training people have been down and talked to us and they have been beefing up the training.

CHAIRMAN AHEARNE: I wasn't aiming just at Salem. It is just that everyone should pass it.

MR. DENTON: One of our concerns with this applicant going back to the original license was the total amount of manpower available at the site. In other words, we were concerned up and down the line not just with operators but with assistants and technicians and health physics coverage and have seen an increase in their attention to this area. It has gotten to a point now where the Human Factors Division has concluded that the plant can be operated with these kinds of staffing even though they are not up to where we ultimately would like to see them.

MS. KERRIGAN: One of the numbers that is not shown on here is the back-up, for example, engineers or

middl management people that also have licenses. This is just the bargaining unit people.

CHAIRMAN AHEARNE: Now, Salem 1 is now operating on what kind of shift?

MS. KERRIGAN: They are also on the three 12-hour shifts.

CHAIRMAN AHEARNE: Three 12-hour shifts, and that is what they would propose for Salem 2?

MS. KERRIGAN: Yes.

MR. NORHOLM: For the near term.

MS. KERRIGAN: Salem 2 also has requirements even though they are in cold shutdown to have the same shift.

CHAIRMAN AHEARNE: So you would end up having three 12-hour shifts.

MS. KERRIGAN: Right.

CHAIRMAN AHEARNE: We had some at least words I thought floating around that that was a maximum, that 12-hour shifts were the maximum that were allowed and that we were trying to encourage people to go to less than that.

MR. DENTON: Yes.

CHAIRMAN AHEARNE: What are their plans, to stay at three 12-hour shifts?

MS. KERRIGAN: No, sir. They plan on, as I said, going to four 12-hour shifts in two weeks and with their plan to be on five 8-hour shifts by no later than July 1st.

MR. EISENHUT: I think it is January 27th.

MS. KERRIGAN: Yes, 26th.

MR. EISENHUT: No. Maybe we are lacking communication here. Not counting the January 6th to 9th exams they have, using the current licensed group, enough already from the past exams that on January 26th they are going to go to four 12-hour shifts. Given the exam success rate is high then in fact they are hoping to be very close to going to the five 8-hour shifts.

MR. DENTON: So they would be at four shifts prior to any contemplated operation.

CHAIRMAN AHEARNE: Leif?

MR. NORHOLM: One point I might make is the fourth shift this month is for the requalification training programs. So operators will still be on three shifts. There will be a fourth shift for training to meet the requalification requirements.

CHAIRMAN AHEARNE: As far as operators are concerned the will still be on the three shifts?

MR. NORHOLM: That is right.

CHAIRMAN AHEARNE: Do they propose, and I gather NRR concurs, to treat the plants at least for SROs as single control room plants?

MS. KERRIGAN: That is right.

CHAIRMAN AHEARNE: Your argument for allowing that?

MS. KERRIGAN: The two control rooms are right across the hall from each other. I think this was discussed back at the fuel load stage where we agreed with the licensee that for SRO purposes they should be treated as one control room since they are directly adjacent to each other but for RO purposes we want to go ahead and treat them as separate control rooms.

CHAIRMAN AHEARNE: Is it your proposal then that you will, independent of what happens on further training numbers, et cetera, always treat them as a single control room?

MS. KERRIGAN: Yes, that is our proposal.

MR. DENTON: Let me ask Domenic Vasallo if he would like to discuss it a little bit more.

MR. VASALLO: Domenick Vasallo. I just want to make a clarification. We are treating them for purposes of SROs as a single control room and four purposes of ROs as a separate one.

CHAIRMAN AHEARNE: I understand that.

MR. VASALLO: That is what was granted to them in their fuel load license and that is what we propose to continue to allow them to do. They would be staffing to meet those requirements.

MR. EISENHUT: Now, to answer one other question, one of the license conditions that we put in the license is

that PSE&G shall commence to use regularly scheduled 8-hour shifts without reliance on routine use of overtime by June the 1st, 1981. What that says is that although we think this approach is an approach that is good in the interim we don't want it to be an approach that continues indefinitely.

You remember at the last meeting we had I think Steve's expression was he is trying to develop some science to go into this approach of whether 12-hour shifts scheduled are better than going with 8 hours where you have a high likelihood of bringing people in early and carrying them over late. I think our thought process was at this point that three 12-hour shifts were adequate.

Recognizing they had a get-well program which gets them to a requalification program using the fourth 12-hour shift we have added in a license condition which states that the licensee shall commence regular requalification training of operators by March the 1st.

In essence that says that he must have four 12-hour shifts capability by no later than March 1. He is planning to do it sooner. Also, the other condition I just mentioned points out that he has to have enough operators go back to an 8-hour shift by June the 1st.

We sort of looked at this as a package that initially we weren't as confident that the licensee had developed a program, a get-well program, overall to get to

where we wanted him to get to be. Now that he has a program and the new program looks like it is working and it is in the right time scale we are willing to buy the three 12-hour shifts for some short period of time.

We do that also recognizing one more thing and that is, as you will see in a minute, we can't really see getting to the point where this plant would be able to start up past five percent certainly before March or perhaps even later. So it is a short period of time we are considering.

(Slide.)

MS. KERRIGAN: When we came up for the fuel load license we talked about the control room design review. This is just to reiterate some of that. We liked their control room. There were a few deficiencies identified and there are still two outstanding which will be completed prior to operation above five percent power.

(Slide.)

On the next slide, Slide No. 11, we did compare Salem with the NUREG-0737 requirements. They meet them all with the exception of the two listed on the slide and those two are tied in with the Westinghouse Owners Group. They will be a couple of months delayed and we found that acceptable.

(Slide.)

On Slide No. 12 with the topic of "Emergency

Preparedness" they do have an interim EOF and an interim TSC.

COMMISSIONER GILINSKY: Would you go back to that point about the reactor coolant system water level monitor. You are talking there about a report?

MS. KERRIGAN: That is a report, yes, sir. That is the final design package.

COMMISSIONER GILINSKY: When do we think that that sort of equipment will actually be installed?

MS. KERRIGAN: I believe we have the date of -- isn't it 7/1/82?

MR. EISENHUT: I think it is 1/1/82.

MS. KERRIGAN: 1/1/82

COMMISSIONER GILINSKY: It is about a year later?

MR. EISENHUT: It is about a year later. This is the item you remember where there were some questions as to whether in fact the technology is even there yet. This is the item that we deferred generically in 0737 for a year. We initially had required this to be a 1/1/81 requirement and we backed it off a year across the board.

What this is at this point is a report we are requiring from all people explaining what system they are going to be using and what it looks like on their plant.

The report on the RCS water level monitor really doesn't bother me being a month late because I know it is being developed generically in most cases and the staff is

following the industry's development on this. It may well turn out that the 1182 schedule is actually best.

COMMISSIONER GILINSKY: Let me ask you are we back on track now?

MR. EISENHUT: Well, things haven't changed since our briefing on 0737 really. An awful lot of reports are due by 1/1/81 as you will see in our briefing on this tomorrow. I don't see us really slipping that many schedules yet and there is no change in the end date as of this time, that is the date it has to be implemented.

COMMISSIONER GILINSKY: Does it look as if equipment will be developed and produced?

MR. EISENHUT: It is still the schedule we said before. We are still shooting for 1/1/82.

MS. KERRIGAN: Westinghouse has supplied Salem with a generic design and Salem is taking a month to adapt it to their particular plant.

MR. ROSS: We did send the Commission an information report a couple of months ago on it which was a status of research.

CHAIRMAN AHEARNE: I wouldn't say it was one that was filled with optimism.

MR. ROSS: It was not an optimistic report. I would expect to update that in about two or three more months because there are active tests at Oak Ridge on the

combustion principle. We have a test which has not yet been evaluated although the data is available on the Westinghouse method, and the semi-scale testing on the Westinghouse system also. I think probably by spring, March or April, we would have a much better idea of feasibility. In the meanwhile the utilities are going full speed.

COMMISSIONER GILINSKY: Going at full speed doing what?

MR. ROSS: Buying equipment.

CHAIRMAN AHEARNE: As I understood it at least out of those reports the sense that I would get is that it isn't question of people being unwilling to put in equipment. The question is trying to get agreement that here is a piece of equipment that is worth putting in.

MR. ROSS: That is correct except for B&W. For B&W plants we don't have the agreement in principle even.

COMMISSIONER GILINSKY: Does it look as if there is a design that will work satisfactorily?

MR. ROSS: Yes. Two designs. I think that either the heated thermocouple or the vessel Delta P system will be found to work. They would like the integral test to prove it because you could take the wrong step with an erroneous piece of equipment. Yes, I am optimistic that either of these systems will function. When you turn off the pumps the PWR is just another BWR, so to speak, under the

scenarios we are talking about and they measure liquid level all the time. They run on it. So I don't have any reason to believe it won't work.

(Slides.)

MS. KERRIGAN: Let's go on with the emergency preparedness. They do have an interim TSC which meets all of our requirements and an interim EOF which meets all of our requirements.

CHAIRMAN AHEARNE: Where is the EOF?

MS. KERRIGAN: The EOF is in Quinton, New Jersey, which is 12 miles from the site. They are still awaiting the final issuance of NUREG 0696 so they can plan their final facilities.

The status of the emergency plan at Salem is summarized on the slide. There are a few deficiencies left in the on-site plan and they are expecting those to be corrected within the next week or two.

We still need to get FEMA findings from the state plans and run the emergency drill on that.

CHAIRMAN AHEARNE: You have someone from FEMA here.

MS. KERRIGAN: Yes, John Dickie from FEMA is here.

CHAIRMAN AHEARNE: Perhaps we could get a summary from him.

COMMISSIONER GILINSKY: Let me ask, when I visited the center they said that it take four hours to activate the

offsite facility.

MS. KERRIGAN: I had someone look into that.

COMMISSIONER GILINSKY: Is that what we expect?

MS. KERRIGAN: No, no.

COMMISSIONER GILINSKY: I may have misunderstood the number, but I thought that is what I was told.

MR. DICKIE: May I have the question again, please? What was the question?

CHAIRMAN AHEARNE: He was saying how long does it take to get the offsite facility activated?

MR. PRIEBE: Right, I think I can answer that. Ray Priebe. I am the staff reviewer for the Salem emergency plan.

Literally it will take probably three to four hours to fully staff the offsite emergency operations facility. However, that is not to say that the functions that would normally be performed by that facility cannot be done until that time.

At the onset of an emergency, of course, the initial response is from the senior shift supervisor which they call the emergency duty officer who is subsequently relieved by the senior plant staff member who would function out of the Tech Support Center until he could be relieved by that transfer of functions to the offsite EOF.

Now, we do require that the director of the

emergency offsite facility be available within an hour. However, the full staffing of that center requires a large number of corporate people to come down from Newark and that may take three to four hours. However, the functions would begin immediately.

CHAIRMAN AHEARNE: The time lag is the time to get from Newark down to the location?

MR. PRIEBE: Primarily, yes.

CHAIRMAN AHEARNE: I think TVA would probably have an answer to that.

COMMISSIONER GILINSKY: When you say the functions would be performed, what functions are you talking about, recommending public protection?

MR. PRIEBE: Right, interface with the offsite support agencies which could include recommending offsite protective measures and radiological assessment.

John.

MR. DICKIE: Thank you for the opportunity to address the Commission. I am the Director of Radiological Emergency Preparedness for FEMA.

What we have been trying to do is to make sure that both New Jersey and Delaware offsite work in tandem.

Let me give you the key dates. We did find out this morning through Janice that the state has indeed sent the plans to FEMA. We had planned to get them on Friday but

they have sent them today to the Regional Assistant Committees.

CHAIRMAN AHEARNE: Both regions.

MR. DICKIE: Actually Delaware got theirs on the 29th of December. So the next then is for the RAC, Regional Assistant Committees to meet and comment on those and that we are expecting around 17 to 18 February for comments back to the states, to the state and local by 18 February.

After those comments are given back to the state the schedule gets a little vague because of the time the state may need to correct any deficiencies that are noted. But we are shooting for a joint exercise with the close cooperation of the NRC and FEMA with the licensee and the state, both Delaware and New Jersey, somewhere near the end of March. If that could be accelerated pending comments back from the states on the comments that we gave them we will try to do that.

CHAIRMAN AHEARNE: Now, in New Jersey's transmission, has New Jersey approved the plan as far as New Jersey is concerned?

MR. DICKIE: I don't know that we would use the term "approve the plan." These things are running in tandem. They just got the plan from the contractor themselves. Part of the FEMA role through the RAC system is to assist the states in developing the plans. So we are in

that iteration right now. There is a dialogue. So we do not have a formal Governor submitted approved state plan but we are still doing our thing.

You know, once you have the exercise then there is a public meeting that is required. So we are talking a schedule that would be compiled and a determination by FEMA and then transmittal to the NRC for your finding. So the benchmark we are shooting for now, at least the main benchmark is the joint exercise in the latter part of March.

CHAIRMAN AHEARNE: I would gather then, assuming that things were acceptable, then sometimes towards the end of April you might be in a position to say everything is acceptable?

MR. DICKIE: I would imagine so. In our joint rules we have a 21-day period for the determination from the state to the Associate Director of FEMA before we transmit it to you. Based on everything working right then April does sound good.

COMMISSIONER GILINSKY: So how did we manage to work things more rapidly in one of the earlier cases?

MR. DICKIE: I am not sure what you are referring to, sir.

COMMISSIONER GILINSKY: The North Anna case.

CHAIRMAN AHEARNE: I think the State had previously reached agreement on what the plan was.

COMMISSIONER GILINSKY: I see. The only thing that remained was the exercise.

CHAIRMAN AHEARNE: The only thing was actually to do the exercise.

COMMISSIONER GILINSKY: I see.

MR. DICKIE: Well, my understanding, and I was not here at the time, but we would not like to have the same process occur through the FEMA at least as occurred in North Anna.

COMMISSIONER BRADFORD: That is the business of having the signoff within a day of the exercise.

MR. DICKIE: Well, we never did approve the plan.

COMMISSIONER BRADFORD: I see.

MR. DICKIE: The license was granted and we are still waiting for Virginia to provide us their corrected plan. We would not like that to happen in this case.

COMMISSIONER GILINSKY: What in fact had you done?

MR. DICKIE: Excuse me, sir?

COMMISSIONER GILINSKY: What in fact had you done? Was there any sort of preliminary approval or tentative approval in the case of Virginia?

MR. DICKIE: I am sorry, I was not here then. I am new and I don't know the specifics of that, but my understanding is that there was indeed some dialogue working. In fact, I think Shelley would probably address it

better than I because he was acting prior to me.

MR. DENTON: I think it was recognized at the time by FEMA that there were some things that still required correction but nonetheless they gave us a letter that in effect indicated their concurrence.

MR. SCHWARTZ: Shelley Schwartz now with the NRC Division of Emergency Preparedness in I&E.

At the time we worked with the State of Virginia and based on ---

COMMISSIONER GILINSKY: Let's see, were you then over at FEMA?

MR. SCHWARTZ: Yes. I was then on loan from NRC at FEMA at the time.

At that time we worked with the State of Virginia and VEPCO at NRC. As a result of the exercise there were still some procedures that needed development by the state. As part of the license that was issued by NRC there were conditions that the state would provide the necessary papers and procedures to NRC to be reviewed. That period of time I believe was about three months. So the state and the local government should have by this time provided FEMA these updated documents for their review.

COMMISSIONER GILINSKY: But didn't FEMA send us a letter discussing the state of emergency preparedness and approving ---

MR. SCHWARTZ: Not approving, sir, but a letter that ---

COMMISSIONER GILINSKY: --- our going forward with the license or recommending or at least indicating no objection to going forward?

MR. SCHWARTZ: That is correct.

COMMISSIONER GILINSKY: Which of those?

(Laughter.)

MR. SCHWARTZ: A letter was sent from FEMA to NRC that said we have these outstanding items based on the exercise the state can perform and the locals can perform in the event of an emergency and we are waiting for these other procedures to perfect the plan. It is not the administrative process that FEMA has in their proposed rule that lays out a rigorous approval process that ends with an approval by the Associate Director for plans preparedness at FEMA which is an ongoing process right now.

COMMISSIONER GILINSKY: I see. And Virginia does not yet have an approved emergency plan, a plan approved by FEMA?

MR. SCHWARTZ: To my knowledge, not yet.

COMMISSIONER GILINSKY: Could someone let us know the status of that? I don't mean necessarily right now.

MR. SCHWARTZ: I think we should report back to the Commission on that.

CHAIRMAN AHEARNE: Any other questions on Salem?

(No response.)

(Slide.)

MS. KERRIGAN: Slide 13 lists the status of Attachment 1 to the license in the package that we sent down here. We had an Attachment 1 to the front of the license that said these items will be completed prior to issuance of the license. All items on that list have been completed with the exception of the emergency planning items and the report that we discussed before that has to come in that we are delaying a month.

(Slide.)

On the next slide, on Slide No. 14 as we mentioned a little bit earlier we did find a couple of mistakes in the draft license. We had given them a little too much time to install their containment water level and we bumped that back, and the masonary wall, there was a misunderstanding and that is delayed until first refueling. We have been getting the editorial comments back from OPE but they are editorial in nature and they do not change the content of the license.

Finally, our recommendation is that a full power license should be authorized following successful completion of the emergency preparedness items.

I believe that is the end of my presentation.

CHAIRMAN AHEARNE: I have two other questions.

First, I noticed that in a number of places in here in the description the statement is made that I&E will verify it or I&E will check it. Is there something that I&E is aware of that they are to check? Is there some list of things that I&E has that, yes, here is a transfer to I&E responsibility?

MS. KERRIGAN: Yes, sir, it is all in the license. Every item that is to be completed by five percent or 60 days, whatever, is listed in the license so that I&E has a handy guide to check off the items.

COMMISSIONER BRADFORD: What is served by the formulation to be completed before five percent or that they are authorized to go to five percent at present?

MS. KERRIGAN: That is right.

COMMISSIONER BRADFORD: So what you are really saying then is before issuance of the next license?

MS. KERRIGAN: No, sir, we are saying prior to operation above five percent power. A lot of these were carried over from the fuel load license. In that we recommended that they be granted a license. There are some actions, and maybe Leif has the status of some of those actions. It was my understanding that a lot of those items are very near completion but we don't have the I&E signoff and we just want to make sure that some of that stuff

doesn't fall in a crack.

MR. DENTON: I think it is partially the fact that they have to try to prepare the license before they have actually finished every little detail. Otherwise if you wait until every detail is wrapped up then you have to wait an extra length of time to produce the paperwork and so forth. So it is an attempt to put everything in writing before and then you rely on I&E to be sure that those things identified do get resolved.

COMMISSIONER BRADFORD: Its practical effect though is that before they can do any more than they can do wright now they have to have done these things.

MS. KERRIGAN: That is right.

MR. EISENHUT: That is right. In fact, another way around it is since we may be talking a couple of months for emergency preparedness as an item would get completed we would go ahead and as we get verification from I&E it is completed we would be deleting them from the license.

MR. DENTON: In fact based on the kind of schedule we have heard today I would expect a lot of these would be completed.

CHAIRMAN AHEARNE: Let me ask this to see if I can't get a little more specific. I am wondering how the following sentence gets translated into something. This is talkin about engineered safety features and reset controls.

It says "The Office of Inspection and Enforcement will verify that these actions have been completed prior to exceeding five percent power."

Now, what kind of a system is in place that alerts I&E to know that NRR has made a commitment?

MS. KERRIGAN: It is in the license.

MR. DENTON: Let me describe the general way. We give copies of our SER to the resident inspectors and we have always given them to I&E over the years so they in essence know what assignments they have got as we finish the review. Then we get a formal letter from I&E prior to the issuance, for example, of an operating license that they have satisfactorily resolved those issues that remain outstanding. So that is the general case and I will let Janice and Leif talk about how this one has worked.

MS. KERRIGAN: Leif, do you have anything to add?

MR. NORHOLM: What will happen prior to a license actually being issued is that we will transmit letters confirming that actions have been taken and that they can be deleted from the license. That particular item is a condition of the license presently.

After the license is issued, and this was the case in the five percent license, there were conditions to be met prior to the core load. All those were confirmed by I&E and documented in appropriate inspection reports. The license

conditions serve as a handy check list to ensure that those items are completed.

CHAIRMAN AHEARNE: So that whenever in here there is a statement that I&E will verify that relates in some way to an explicit condition that is in the license?

MS. KERRIGAN: Yes, sir.

CHAIRMAN AHEARNE: The other question was, and I am not sure whether it is Harold or Leif or someone from I&E, could you talk about this particular utility's ability to run a plant?

COMMISSIONER GILINSKY: You are referring to this systematic assessment ---

(Laughter.)

I am willing to lump it in with your question if that is what you are referring to.

MR. NORHOLM: One way of determining their ability to run a plant is reference to the systematic assessment a licensee performs.

MS. KERRIGAN: Do you need a slide, Leif?

MR. NORHOLM: Why don't you put the first one up.

MS. KERRIGAN: Could you put up back-up slide 15.

(Slide.)

MR. NORHOLM: This is a new technique being used by the regional offices to look at licensee performance looking at their inspection history for a period of 12

months. Generally it is conducted by senior regional management with input from resident inspectors.

In the case of Salem this is conducted in October, and, by the way, the first round of these evaluations is not complete in Region I yet. We did look at Salem 1 and 2 covering the period of September 1st, '79, until August 1980 and the evaluation was done in October.

We looked at 19 functional areas and again we looked at both units. Of those 19 the conclusions reached by the SALP essentially are was licensee performance satisfactory or unsatisfactory in an area, was licensee performance acceptable at the end of the evaluation period, particularly if we found unsatisfactory performance during the year, and finally what change in the application of resources by I&E was dictated by the findings, either an increase or a decrease in the inspection effort in that area because of the types of items found.

If you would like, I can go into the details of the eight areas which were identified as needing increased inspection effort for Salem.

CHAIRMAN AHEARNE: Why don't you.

MS. KERRIGAN: Would you put on back-up slide 16.

(Slide.)

MR. NORHOLM: This slide lists the 19 areas that we addressed and the eight that indicated that we should

have increased inspection effort for plant operations, surveillance, reporting, design changes and modifications, radiation protection, radioactive waste management, security and safeguards and management controls.

Management controls tends to be a catch-all. If we have that many areas that need attention then mangement controls also need attention.

CHAIRMAN AHEARNE: I recognize that it is not a total I&E normed program, it is a regional program, nor, as you say, has it even been normed within the region.

MR. NORHOLM: Right.

CHAIRMAN AHEARNE: Nevertheless, at least looking at this particular plant the the I&E regional conclusion is that the total inspection effort has to be increased because there are no decreases.

MR. NORHOLM: Let me explain that a little more. We did make the conscious determination that licensee performance at the end of the period was satisfactorily acceptable. We made that on the basis that those areas where we had identified concerns over the 12 months appropriate corrective action had been initiated and in many cases completed.

So the purpose of increasing the inspection effort is confirmatory in nature. We expect that we won't find problems but we need to confirm that.

CHAIRMAN AHEARNE: All I was trying to do is to look at if you have a finite amount of resources. You are going to increase the effort in one place. Although perhaps it has not been a normed approach, nevertheless something has got to decrease.

MR. NORHOLM: Right, I agree.

CHAIRMAN AHEARNE: So that has to mean at least in this case there is an increased concern.

MR. NORHOLM: That is correct. What we are really trying to do is to determine the areas that need to be focused on. The inspection effort is both regional based and it is to resident inspectors and we can certainly cause our focus to be on these particular items.

MR. DENTON: There has been a company reorganization, too, at about that same time to increase the management attention to nuclear operations within the company.

MR. NORHOLM: That is right.

MR. DENTON: I assume that is part of the corrective action.

MR. NORHOLM: Right.

CHAIRMAN AHEARNE: Is the plant totally a PSE&G plant?

MR. NORHOLM: It is totally operated by PSE&G.

CHAIRMAN AHEARNE: Totally owned?

MR. NORHOLM: No. The ownership is split with Philadelphia Electric, Atlanta City and Delmarva.

CHAIRMAN AHEARNE: Are Salem plants the only ones the company owns, nuclear plants?

MR. NORHOLM: The only operating plants. Oak Creek right next door is under construction.

CHAIRMAN AHEARNE: How long have you been there?

MR. NORHOLM: I have been on site two and a half years. I have been inspecting Salem for three and a half years.

CHAIRMAN AHEARNE: What is your personal judgment on the operation of the plant?

MR. NORHOLM: Overall I think they have been learning for the last five years.

CHAIRMAN AHEARNE: We all have.

MR. NORHOLM: The reorganization indicates that they have learned some lessons and I think from here on in should make a presentable appearance as far as bodies like this.

MR. DENTON: My own view from the time we sort began the OL review of that company going back about a year is that they were entirely too thrifty in the resources they had assigned to the operation. I think over the past year through the licensing review we have tended to demand more from them and they have come to see this and the

reorganization sort of reflects it and improvements are definitely noted.

I think if you go back about a year it was operated with what I would consider limited resources devoted to the plant throughout. I am not just talking about a licensed operator but it just didn't seem that they had given the amount of attention to operations and we now see as necessary.

CHAIRMAN AHEARNE: This reorganization you are talking about basically did what?

MR. NORHOLM: Two basic changes occurred. Prior to the reorganization the station manager reported to a general manager who had all stations, fossil or nuclear, reporting to him. They have now made a split between the nuclear and fossil electric generation organizations at the general manager level.

The other significant change is to reorganize quality assurance to make it a single organization reporting at a higher level of management than it did before.

MR. DENTON: This is a large company with considerably engineering resources. I think Janice or Darrell can add their comments, but I just didn't see that they were bringing to bear on plant operations the resources that the company really possessed and that was part of our effort over the review effort to be sure that turned around.

CHAIRMAN AHEARNE: Darrell.

MR. EISENHUT: Well, I guess I probably ought to make several comments.

First, addressing the specific issue here, I guess I second what has been said. The problem as I saw it over the last year or so was here is a very large company with lots of capability and lots of potential, yet we were still having difficulties as we went through the process of getting really an issue resolved until it was brought to the right level of high enough management attention.

By and large I am optimistic that the reorganization of last fall will help to address that. The other thing that will help address it is our continuing to follow this. You know, if I see the problem come up again we will have the appropriate management level meeting to try to get it addressed.

So I am encouraged that the reorganization I think will address this. As Leif said, I think things are improving.

MR. DENTON: I can't help but observe that the chief nuclear person in the company, Mr. Snyder is not here today. I had hoped that he would have been here to attend this very important meeting. It has been an ongoing issue within the staff to raise our sensitivity to operational concerns.

COMMISSIONER GILINSKY: He is the man in charge of nuclear operations?

MR. DENTON: Yes.

MR. NORHOLM: He is the senior vice president in charge of production.

COMMISSIONER GILINSKY: In charge of fossil or nuclear?

MS. KERRIGAN: Production. Mr. Mettel who is at the same level as Mr. Snyder in the organization is on the licensing side of the house. He is responsible for Salem Unit 2. Mr. Snyder is on the operations side of the house.

COMMISSIONER GILINSKY: Can I ask you in the I&E assessment under plant operations, the report speaks of operator attitudes and inattention, is that control room operator or operator as the utility?

MR. NORHOLM: Actually both, but the control room operator is the one that comes to mind most of the time.

COMMISSIONER GILINSKY: Has that turned around sufficiently?

MR. NORHOLM: There were significant attitude problems when the licensee attempted to work 12-hour shifts by scheduling eight and the extra four came out of whoever could be forced to work. Since he has scheduled 12-hour shifts things seem to be a lot better in terms of attitudes of the operators in preparation to work 12 hours and knowing

full well that when they say two days off they mean two days off.

COMMISSIONER GILINSKY: Is it as simple as that?

MR. NORHOLM: The two go together. There is an improvement in attitude and there is an improvement in attention by the operators. They also are getting, as you saw by the numbers, more people available to work. I think it has gotten better.

COMMISSIONER GILINSKY: How frequently are these assessments made?

MR. NORHOLM: We intend to do another one about April 6th which will be six months after the previous one. They will look at a year in overlapping intervals.

COMMISSIONER GILINSKY: In this case you mean fairly soon?

MR. NORHOLM: For this particular plant we will have one in April.

CHAIRMAN AHEARNE: Why is that?

MS. KERRIGAN: That was at the specific request of the Salem management. I think that Mr. Eckert asked for a review very quickly, as soon as possible afterwards. He was very concerned when we did give him the results and he asked us to specifically come back and prove that they could turn themselves around.

CHAIRMAN AHEARNE: I see.

COMMISSIONER BRADFORD: How quickly would you have normally done it?

MR. NORHOLM: Well, the original intent was to do them every six months. I don't know if we are able to hold to that schedule. We do intend to for Salem to do another full review in April.

CHAIRMAN AHEARNE: Darrell, did you have anything else?

MR. EISENHUT: First, our overall program is that once a year on all operating plants and all plants under construction there will be some form of a SALP review.

Now, just a couple of notes of caution, and Jim Taylor is not here -- I&E was going to be here I thought to address this. We have in headquarters a review group.

CHAIRMAN AHEARNE: You weren't implying that if he were here you wouldn't say it?

(Laughter.)

MR. EISENHUT: No. I would try to let him say it.

We have a review group in headquarters who has two functions. One function is to look at all of these SALP reviews and the detailed back-up on them. The objective is that we are going to come out and literally rate plants, that is utilities, by average, above average and below average. Those are the three groups we are looking at.

The second main function of this headquarters

group panel is to somehow normalize these different reviews done around the country.

The group in headquarters consists of four people. It consists of Jim Sniezek and Norm Mosely from I&E, Carl Michaelson and myself. Now, that group will be done these reviews and actually they have a three-man staff who will be looking at the different plants trying to put them in these schemes.

The other point to make is that the SALP as we go down the road will not be just an I&E review, it will really be an NRC review taking input from NRR, perhaps AEOD, et cetera. The Project Manager, in this case Janice, will sit on the board, actually the board meeting out at the utility.

The purpose of having the NRR input, for example, is that the project manager will be drawing input from how the other divisions perceive the utility's performance, particularly Steve Hanauer's division. That is, a lot of the utilities are doing a mangement review or a licensee performance. So we are really integrating these into a set.

Now, the other thing to be cautious about when you look at these increased or decreased inspections, first you must remember the I&E inspection envelope allows some fluctuation, increases or decreases, already.

The second thing to note is that if you have a couple of very strong inspectors, which I happen to think in

this case we do have, you have better and stronger inspection and you may in fact find more things.

A utility who is very, very vigilant about reporting and looking very hard will submit more LERs and more information. Therefore when you do the statistics, whatever they mean, you can in fact infer some raw conclusions.

COMMISSIONER GILINSKY: But we haven't been talking here about statistics.

MR. EISENHUT: No, but the statistics are in fact part of the base that goes into the SALP program.

COMMISSIONER GILINSKY: That is true but ---

MR. EISENHUT: It is a large piece of determining whether or not you increase or decrease inspections.

COMMISSIONER GILINSKY: The more significant comments from my point of view and the more disturbing ones are ones about company attitude.

MR. EISENHUT: Oh, certainly, I agree with that. I am just saying that it varies tremendously though from plant to plant. Many of the SALP reviews from a region are based very largely on statistics. We all have that same caution.

So there is considerably flexibility in the interpretation of the actual make-up of the members as to what constitutes increase or decrease. For example, the

headquarters panel has now looked at, it is either eight or nine plants, that is looked at the reviews done, and I think everyone concluded that there has to be increased inspection in several areas.

It gets back to the same question the Chairman raised. If every one of these conclude that you have to increase inspection in three, four, five and up to nine and ten areas maybe the norm is somewhere adjusted wrong. It is just a note of caution that we as a panel have looked at these and feel the same conclusion you mentioned.

The actual item-by-item conclusion of increase inspection here, increase it there and increase it there really does not carry that much weight with us. It is really the overall underlying management attitude and the management approach which seems to be there in the bottom of every one of these and not just these areas but even the areas that we have discussed earlier, for example, environmental qualification. It took us a long period of time to work the issue out.

COMMISSIONER GILINSKY: It would not be good if the next review concluded that the plant operations category was unsatisfactory.

MR. EISENHUT: Absolutely. I agree with you. That is our point.

COMMISSIONER GILINSKY: However you define the

elements that enter into that.

MR. EISENHUT: That is right.

MR. NORHOLM: I can say now since there are only six weeks left in the review period that there probably won't be an increase.

MR. EISENHUT: Then you get back to the other system. I&E, I don't believe, if they would have a problem with the management of the plant, and NRR, if we had a problem for our management reviews, we would be recommending a license without some additional steps independent of the SALP review.

COMMISSIONER GILINSKY: I understand that but it is important that that level of performance and rate of improvement continue.

CHAIRMAN AHEARNE: We are also I think as an agency still developing what kind of approaches we take in overall management. So we are still trying to fit all these pieces together.

MR. EISENHUT: It is very complicated.

MR. NORHOLM: One comment I would like to make on the corrective actions taken by the licensee, in most of the areas listed the corrective action is addressed at the corporate level or at the station level in terms of procedure or practice or something like that. The benefits would accrue to both units. So that the addition of Unit 2

doesn't really impact on that.

CHAIRMAN AHEARNE: I wonder if you could give me a little chart which would show me what is the organizational structure starting at the [illegible] of the corporation.

MS. KERRIGAN: All right.

MR. DENTON: Mr. Chairman, I would suggest that it would be useful to the staff to get any comments on any areas other than emergency planning as they are developed and see if we can't complete our documentation of the review of the license so that when the emergency plan issue is concluded that will be the only issue that would still be open.

CHAIRMAN AHEARNE: Vic?

COMMISSIONER GILINSKY: I don't have any major questions I feel need to be resolved. In visiting the plant one of the things that surprised me is a lot of the equipment that would otherwise be in covered buildings is out in the open. Does that pose any safety problems?

MS. KERRIGAN: We have looked at turbines and we have looked at the cracking of turbine disks and we concluded that there was no action that needed to be taken. We asked them to inspect those turbines in their second refueling.

MR. EISENHUT: That is not uncommon. In fact, quite a number of the southern plants have a lot of them

outdoors.

COMMISSIONER GILINSKY: Well, I have seen it in California. I just haven't seen it in the Northeast.

MR. EISENHUT: A lot of the things, particularly the turbines outside is pretty common.

COMMISSIONER GILINSKY: No, I don't have any further questions.

CHAIRMAN AHEARNE: John?

COMMISSIONER HENDRIE: I don't have any questions. I commend the staff for a very well prepared briefing this morning and would be happy to leave the matter with the Commission leaving it to Harold to find a satisfactory completion of the emergency planning requirements and he can issue it at his discretion thereafter. I don't feel the need to see it again.

CHAIRMAN AHEARNE: Peter, questions?

COMMISSIONER BRADFORD: No further questions now, John. I don't have any concerns that in any way outpace the emergency planning concern. I would be interested to see the SER on equipment qualification but that will clearly be over and done with long before the emergency planning matter is laid to rest.

I would to at least see the FEMA conclusions following the emergency planning drill before signing off on it once and for all, but short of that I don't have any

difficulty with the staff recommendation.

CHAIRMAN AHEARNE: Let's see. I am not sure then if I completely understand how you would then leave it.

Joe has proposed that we approve the license. I think what Joe has proposed is agreeing to Harold's recommendation which is approve the operating license conditional upon the successful completion of emergency preparedness. Upon that successful completion Harold could go ahead and issue it.

MR. DENTON: Yes, that is our recommendation.

CHAIRMAN AHEARNE: That is your recommendation and Joe has said that he would concur in that.

Now, what is your proposal?

COMMISSIONER BRADFORD: I took it that Joe went a step further and said that for his part he was approving emergency preparedness, too, unless Harold came back and said there is something wrong here.

COMMISSIONER HENDRIE: Approving issuance of the license without the Commission having to hear it again, leaving it to Harold to conclude that the emergency planning is in satisfactory shape and all the requirements of FEMA are met.

COMMISSIONER BRADFORD: We may not be saying anything different. I just wouldn't conceptually turn loose of the Commission's hold on the license until we have the

FEMA letter in hand. I don't know that that requires another meeting or anything of that sort but I would wait until that point.

CHAIRMAN AHEARNE: Would it be correct to say that you would be satisfied with whatever mechanism that SECY or OGC could come up with that a notational agreement would be adequate without going through a full meeting again? Is that correct?

COMMISSIONER BRADFORD: Yes.

CHAIRMAN AHEARNE: I am just trying to make sure we get the procedure correct.

COMMISSIONER BRADFORD: That is perfectly fair. I assume it allows obviously if emergency preparedness turned out to be a nightmare we would have a meeting if we had to, but sure.

CHAIRMAN AHEARNE: Well, I assume if it did that Mr. Dickie or his cohorts and Mr. Denton would be back up here and telling us that.

COMMISSIONER BRADFORD: Sure. The way you have stated it does not give me any difficulty.

CHAIRMAN AHEARNE: Victor?

COMMISSIONER GILINSKY: Well, I don't see a need for a further meeting but I guess I would put off an affirmation vote until everything is in order.

CHAIRMAN AHEARNE: An affirmation vote would be a

meeting.

COMMISSIONER GILINSKY: I mean not a meeting dealing with the details of the license.

CHAIRMAN AHEARNE: So you would not go as far as Peter would go?

COMMISSIONER GILINSKY: Well, I think that the Commission to give its approval has to vote and I would leave the formal vote to the time when we are ready to deal with it. As far as I am concerned in the areas other than emergency planning I am satisfied.

CHAIRMAN AHEARNE: Harold, I think where we have come out is that all four of us are in agreement on all aspects of it other than the emergency plan. I think we will have to wait and see. Once the emergency plan comes in I would conclude that if there are no real problems that it will need at most for you to come down and tell us that and it may not even require that much of a procedure. If there are problems, clearly we all would want to revisit it. With the exception of that I think that we are all in agreement.

MR. DENTON: We will proceed with that understanding.

COMMISSIONER GILINSKY: As far as the non-emergency planning aspects of it the Commission has clearly concluded it is satisfied.

CHAIRMAN AHEARNE: There are various pieces, as

Jim has said, that have to be put into the SER, but those are wrapping up pieces.

All right. Thank you, Janice and Harold.

Thank you very much.

(Whereupon, at 11:45 a.m., the meeting concluded.)

* * *

NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

COMMISSION MEETING

in the matter of: Public Meeting - Discussion and Vote on Full Power Operating License for Salem

Date of Proceeding: January 14, 1981

Docket Number:

Place of Proceeding: Washington, D. C.

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

Mary Simons

Official Reporter (Typed)

Mary C Simons

Official Reporter (Signature)