ORIGINAL

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the matter of:

DISCUSSION AND POSSIBLE VOTE ON
RESTART OF SALEM UNIT 1 & 2

Docket No.

PUBLIC MEETING

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NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING

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Nuclear Regulatory Commission
Commissioner's Conference Room
11th Floor
1717 H Street, N.W.
Washington, D.C.

Thursday, April 14, 1983

The Commission met in open session, pursuant to notice, at 9:35 a.m., NUNZIO J. PALLADINO, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

NUNZIO J. PALLADINO,	Chairman of the Commission
VICTOR GILINSKY,	Member of the Commission
JOHN F. AHEARNE,	Member of the Commission
THOMAS ROBERTS,	Member of the Commission
JAMES K. ASSELSTINE,	Member of the Commission

STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

W. DIRCKS

H. PLAINE

A. KENNEKE

H. THOMPSON

H. DENTON

D. EISENHUT

R. STAROSECKI

V. NOONAN

AUDIENCE SPEAKERS:

J. LITTLE

E. CASE

R. MATTSON

B. KENNEDY

R. ECKERT

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P R O C E E D I N G S

CHAIRMAN PALLADINO: Good morning, ladies and gentlemen. The Commission is meeting this morning to be briefed on the results of the staff's review of failures to scram events at the Salem facilities. These results are discussed in the staff's paper, SECY 83-98E.

The overall conclusion in that paper is that the actions taken by the licensee subsequent to the events provide reasonable assurance for restart of Unit 1. The licensee has committed to keeping that unit shut down until problems that surround the events are resolved.

Unit 2 is also shut down for refueling and will remain shut down until similar concerns are resolved.

As you will recall, we met with the staff twice last month to discuss the Salem events. At our last meeting, there were still a number of issues yet to be resolved and we asked the staff to return when resolution was achieved.

Our purpose in the meeting today is to provide the Commissioners with a discussion of the staff's review and to answer any questions the Commissioners may still have, and particularly interested in the present level of safety in the plant with respect to the equipment operability, maintenance procedures, operator training and training of other personnel.

I propose that at the end of the meeting, the Commissioners discuss whether or not they are ready to vote

on the acceptability of the staff's conclusions. One Commission has already indicated that he is not prepared to vote today.

I should also point out that last night we learned of an event involving inadvertent operation of the safety injection system for two minutes at Salem's Unit 1 yesterday. While this event is not directly related to the topic schedule for today's meeting, I have asked the staff to present a brief report on the event after we have dealt with our scheduled discussion of scram failures.

In view of the extensive nature of today's subject, I propose that we not try to cut off the discussion to accommodate a management meeting at 11:00 this morning. Instead, I propose we plan to go to noon with a short break around 10:45 a.m.

I understand the staff has about a 15 minute presentation they would like to make and then open the matter up for discussion.

Do any of my fellow Commissioners have any remarks before we begin?

COMMISSIONER GILINSKY: I guess I do, since I was the one who suggested that we not vote on restart of the plant today, I think I ought to explain why.

We received memoranda from the staff in the last couple of days, to respond to some questions I raised. These

raised further questions, the responses, which in some ways are more serious than the ones we have dealt with up to now. Let me tell you specifically what I'm referring to.

I asked whether after the August 28th and January 6th single breaker failure events, whether the unit was taken critical prior to investigating the cause for the breaker failure on those dates.

The response I have is that in fact was the case, that the reactors were returned to full power and in the other case started up after replacing the failed breaker with a new and operable breaker, without completing investigation of the breaker failure mechanism.

That means one wasn't sure exactly what was wrong and the plant was returned to operation.

Since, we have gotten an amendment to that sentence and it says "According to the licensee, that was the case," and what I'm referring to now is the question of whether the breaker that was put into that position was known to be operable. I understand that is now an open question.

Beyond that, after the January 6th event, there was some maintenance done on the Unit 1 breakers and the failed Unit 2 breaker was now in Unit 1.

There is some controversy about whether all of those breakers were maintained or were not maintained. I gather the company says they were and the vendor that maintained

them says only one of those breakers was maintained.

The thing I'm driving at is if in fact the breakers were known to be bad and particularly after looking at one of them, it had dust and dirt and had not been serviced for some time, and in that situation, the other breakers had not been maintained, I regard that as not responsible operation.

I want to say that the facts are unclear. We don't know precisely what the situation was.

There is also a question in connection with the restart of Unit 2 after the events referred to without fully assessing and determining the cause of the failures.

What we are dealing with here is something different than we dealt with before. Up to now, we were dealing with you might say carelessness of a very high order, but nevertheless, carelessness and oversight, failure to consider items to be safety related and failure to observe that there was a trip on February 22nd and so on.

Here the questions that are raised are of you might say neglect of duty. Again, we hasten to say we haven't heard from all sides and the facts aren't in. These are questions that need to be resolved before we go forward and I doubt that we can resolve them today satisfactorily.

I urge you to put off consideration of restart today.

I might also add on a separate item that in reading the staff submission and also the more recent ones, it looks

to me as if we really don't know what caused the breakers to fail and in fact there is some confusion as to what happened to these particular breakers, whether they were in fact tested by the various laboratories.

I had asked for a run down on what happened to the various breakers and there seems to be just question marks as to where they were February 25th and thereafter. We know the supposition that the wrong lubricant had been used has turned out to be incorrect.

At any rate, I hope we can shed some light on these questions today.

CHAIRMAN PALLADINO: You are raising a number of questions that may or may not relate to restart. I think of importance would be whether or not the breakers that we are putting in are satisfactory. I understand they are new breakers and I understand they have been tested, that there has been demonstration that these breakers, at least when new, operate.

I think it is important to determine whether or not, at least as far as hardware is concerned, that these breakers are in the condition to operate satisfactorily.

COMMISSIONER GILINSKY: This is not just a breaker failure. This is an organization failure.

CHAIRMAN PALLADINO: I was talking primarily to the breaker problem, which you seemed to indicate that the history

would clear up. It might clear up more details about the maintenance but I think it is important to know whether or not the breakers that are in there have a high likelihood of operating successfully based on the experience that we have today with new breakers.

COMMISSIONER GILINSKY: My point was not to determine the maintenance history of the breakers so that we could fill in historical details. The question is did the company behave responsibly. I think that bears very strongly on the decisions we make today.

Let me say further that I think, since you questioned the relevance, that we ought to be talking about whether the license ought to remain in force, not whether the plant ought to go back in operation.

CHAIRMAN PALLADINO: You spoke on a number of subjects. I was just clarifying the subject with regard to the breakers themselves. I think the other items, we will have to see how people feel, how the Commissioners feel about it as the information develops.

COMMISSIONER AHEARNE: I guess I see that there are three separate or somewhat separate issues. One is is the hardware ready for restart; a second are the operating, which includes the management, ready for restart, and a third is what kind of enforcement action ought we to take.

As Vic has pointed out, it is not obvious those are

independent, but at least to start with, they are separate, how separable we will see as we go on this morning.

My understand, correct me if this is wrong, is that any potential enforcement action would be addressed separately in a separate meeting.

CHAIRMAN PALLADINO: I did not intend to take up enforcement actions today. I do agree, as I mentioned in my opening remarks, that I'm quite interested in not only the procedures but the status of training of the operators and other personnel including not only maintenance personnel but senior technical supervision.

Any other comments that anyone has?

(No response.)

CHAIRMAN PALLADINO: I propose we turn the meeting over to Mr. Dircks and proceed with the presentation.

MR. DIRCKS: I think as you mentioned, it is going to be a short summary of the issues that we have outlined once before to the Commission, the status of the actions and commitments taken.

I think we do want to point out, an issue that Commissioner Gilinsky talked about, the servicing of the one breaker or the four breakers. We don't really have the answers to that question. It's a dispute between what one party says versus what another party says.

I might add that both Westinghouse and the utility

are in the room today and if you want to follow up that issue, you can, but probably you won't get a resolution there either and if you want to follow up further, we'd recommend that you ask the Office of Investigation to take a look at that point.

Some issues we can -- Commissioner Gilinsky discussed, I think there has been some change from what we reported in the status report versus what we have today, but I think that's due to the accumulation of information that we have pulled together and we can resolve some of those points.

Others, we still are accumulating information and we probably can't shed too much more light on exactly why the breakers failed. We have an accumulation of reasons and we can discuss those, but I don't think we can pinpoint one specific reason, and we'll get into that point as we get into the discussion.

Harold, do you want to take it?

MR. DENTON: Before I begin, let me note that we did pass out this morning a letter we received from the company, that they had received from a consultant named BETA, who they had brought in to do a review of issues surrounding the breakers. I provided copies of that to the Commission this morning.

CHAIRMAN PALLADINO: What did you provide?

MR. DENTON: A copy of a letter written by BETA to the company, and that we received this morning. Representatives

from BETA are in the audience if you need to have questions on that.

(SLIDE.)

MR. DENTON: The first slide, I want to use just to review the information that's available on this, that's been prepared by the staff. The first major report written was the fact finding task force. That was based on information available to the staff during the first few days of March.

We did send copies of that to all the other operating power plants for their review and information so they would be aware of what we were finding at Salem.

You mentioned, Mr. Chairman, the prior Commission briefings on the subject, and the fact that the Commission brought up issues that we should pursue. We provided the Commission two status reports prior to today's meeting, and for today's meeting, we provided a final draft safety evaluation report and a proposed order that incorporates all the information we have learned about this to date and describes the results of our review, and finally, we provided answers to Commissioner Gilinsky on April 12th and April 13th.

That sort of constitutes the documents which we have issued on this event.

Let me turn next to the hardware issues and just give a very brief recapitulation of where we are on each of the major topics.

(SLIDE.)

MR. DENTON: You may recall, just on the hardware or the equipment issue, there were a number of issues that we developed. One of the root causes of this problem in addition to the management issues was the misclassification of this breakers.

As you recall, these breakers were not properly classified as safety related equipment which led to sequentially less and less attention to them.

With regard to the identification of the cause of the breaker failure, there has been a lot of testing done by Westinghouse. We have retained a consultant, Franklin Research Institute, to do testing. I don't think we'll ever know absolutely what caused the breakers to fail.

We have Vince Noonan here at the table with us to describe what has been done. There are ongoing programs to make sure the testing is adequate for these breakers that we are proposing but the order and the actions that have been taken are not predicated on any particular cause of failure.

The new breakers, new lubrication, new tests, I don't know any other way to approach that one. It appears there is perhaps some generic problems with these kinds of breakers but the breakers have been restored to all new and properly lubricated and tested.

COMMISSIONER AHEARNE: Harold, could you follow the track that Mr. Gilinsky started you people on and perhaps explain who has the breakers that actually failed and what tests were done on the breakers that failed?

I'm trying to draw a distinction between tests on the type of breaker that failed, which will give you perhaps generic information and tests on specific breakers that failed, and the way the reports are written, it's not clear. It appears at the moment the best I can tell that Westinghouse has two breakers that may be the ones that failed and Franklin has a breaker which probably wasn't one of the ones that failed and they have examined breakers at the plant which would include breakers that failed.

MR. DENTON: I will ask Vince Noonan to answer that. Part of the problem is they didn't keep up very well with the breakers during this period and there is some confusion about which breakers were where.

I think Commissioner Gilinsky is right in one of his observations, that following the return to service in January, after the breakers had been maintained by Public Service and the company in some combination, they were not tested before the plant returned to service. They were tested within seven days but that test only tested the so-called main breakers and did not test the bypass breakers.

Seven days after they returned to service in

February, two main breakers had been tested but we don't know which ones.

COMMISSIONER AHEARNE: My question is really much simplier, focused on the February events.

MR. DENTON: I was going to try to describe why there is uncertainty about which breakers were even in service during this period and eventually, on January 22nd, they had a scram where the breakers -- February 22nd -- they had a scram where the breakers did perform but there was a problem with a cover and they replaced that breaker with a bypass breaker that had never been tested.

I'm getting to what was in service on the day of the failure and just to lay the background that the breakers were shifted around quite a bit and with that understanding that there is confusion about which breakers were where on events leading up to that day, I'll let Vince answer who got which breaker.

MR. NOONAN: I would like to make one point of clarification. We are not talking about the breakers. The breakers are still in the plant. We are talking about the undervoltage trip attachments, so we are talking about a component of that breaker.

The undervoltage attachment that we received, the NRC received and we gave to your consultant at Franklin, was the undervoltage trip attachment from the B breaker at Unit 2.

It was not one of the failed units.

COMMISSIONER AHEARNE: That was equivalent to giving them the type of breaker that had failed but not --

MR. NOONAN: We were aware of this.

CHAIRMAN PALLADINO: To whom?

MR. NOONAN: This was given to our consultant, Franklin Research Center in Philadelphia. This is the one that we did our work on and it was done -- we knew this from the very beginning. There was no doubt in our mind that we did not have any of the failed units. We knew we did not have a failed unit.

COMMISSIONER GILINSKY: You drew up a chart of breaker locations in response to one of my questions. Does that refer to the coil locations or breaker locations?

MR. NOONAN: The chart refers to the breaker locations. The serial numbers you see at the bottom, they should be switched. We found that late last night when preparing this, that the designation is correct, the serial numbers have been typed at the wrong designation. In other words, the serial number for 1TA now should be --

COMMISSIONER GILINSKY: Reserve left to right?

MR. NOONAN: Yes. The 1TA stays the same, 1TB, those designations stay the same, just the serial numbers associated with those are just flip flopped.

COMMISSIONER AHEARNE: Looking on this chart,

Attachment one, the one that you ended up giving to Franklin--

MR. NOONAN: Would be the undervoltage trip attachment out of 1YA on the chart.

MR. DENTON: That is the answer to question two of Mr. Gilinsky's letters.

MR. NOONAN: We have information based on what was told to us by the licensee, that the two failed undervoltage trip attachments are with Westinghouse. The March 22nd letter that Westinghouse sent to the NRC indicates that they did their analysis on one of these failed units. They identified it as Unit 1 "B" breaker in the letter.

COMMISSIONER AHEARNE: How many failed on February 22nd?

MR. NOONAN: There were two known failures.

COMMISSIONER AHEARNE: And on February 23rd or the 25th?

MR. STAROSECKI: There were two trips on February 22nd. There were two reactor scrams on February 22nd.

COMMISSIONER AHEARNE: How many of the undervoltage trip attachments failed on the 22nd?

MR. STAROSECKI: On the second scram, two of them failed.

COMMISSIONER AHEARNE: On the 25th?

MR. STAROSECKI: Two of them failed?

COMMISSIONER AHEARNE: The same two or had there been a replacement?

MR. STAROSECKI: No. The same two that failed on the 22nd also failed on the 25th.

COMMISSIONER GILINSKY: Why then do you have the question marks, indicating the locations of the breakers?

MR. STAROSECKI: First of all, what I was trying to point out is there were two scrams on the 22nd and there was a swapping of breakers on the 22nd, so what used to be a bypass breaker on the 22nd in fact turned out to be one of the breakers that failed in the evening on the 22nd. That's the point I wanted to highlight.

The question marks is we recreated this diagram using the information we had in the fact finding report and we don't have all the information. What I'm telling you on the 25th is just from my knowledge and based on my discussions.

We have tried to use the fact finding report and the data in there to recreate this.

COMMISSIONER GILINSKY: You have additional information that tells you something about the locations of breakers?

MR. STAROSECKI: Based on personal knowledge, what somebody said that they did not swap it around. I don't have right now firm information that can resolve the question marks.

MR. DENTON: The absence of treating these in the manner in which they should have been treated has led to the confusion about which breakers were where.

COMMISSIONER AHEARNE: Is it correct that there are

only two trip attachments that failed, two specific ones?

MR. DENTON: You don't know that the other ones may not have failed, too, but just went undetected.

COMMISSIONER AHEARNE: From what you know, there were two specific ones that failed, and they were the same two on both the 22nd and 25th?

MR. STAROSECKI: That is correct.

COMMISSIONER AHEARNE: It is those two, to the best of your knowledge, that Westinghouse has?

MR. NOONAN: Based on the information we have seen as of yesterday.

CHAIRMAN PALLADINO: When you say Westinghouse has it, is this the Commercial Division or Nuclear Division?

MR. DENTON: I don't know. We have Mr. Little here from Westinghouse. Maybe he should answer that question.

CHAIRMAN PALLADINO: Is Mr. Little here? Could you respond, please?

The question is where are the two units that Westinghouse has, the two undervoltage trip attachments?

MR. LITTLE: They are still at Westinghouse.

CHAIRMAN PALLADINO: Where?

MR. LITTLE: I believe they are at our Switchgear Division.

CHAIRMAN PALLADINO: Just want to make sure they don't get lost.

MR. LITTLE: We won't lose them.

MR. STAROSECKI: I would just say after the 25th, they did those tests, five tests, on those two failed breakers. One breaker failed five times and the other breaker failed three times, then they started swapping and we lose track of what went where. I want to make it clear that it is my understanding based on my discussions with people that have told me that there was no swapping prior to the 25th, after the 22nd failures.

COMMISSIONER GILINSKY: How does Westinghouse know they have the two that failed?

COMMISSIONER AHEARNE: How is Salem confident they sent the two that failed?

COMMISSIONER ASSELSTINE: That's right.

MR. DENTON: Maybe we should ask the company that. We can tell you what we have been told and that's what we have tried to do. We are not investigators. I would think maybe that's the office in case there are disputes that would properly settle these.

COMMISSIONER AHEARNE: I guess underlying, and it is really Vic's issue, underlying it is if we are trying to understand why these breakers failed as opposed to why that type breaker failed, it would seem to me critical that we understand which of the breakers or which attachments are the ones that failed and make sure we understand the tests done

on those specific attachments.

I guess it is initially hard for me to understand how we can reach a conclusion that we know why those specific attachments failed unless we are confident we know those specific ones were tested.

MR. DENTON: I guess I approach it somewhat differently. These are not the only failures these breakers had. They failed in August. They put in a new breaker from the other unit. They failed in January. They didn't test them. At least one of the breakers worked the morning of the 22nd. They put in an untested breaker there. I have come to conclude that whatever the root cause of the failure of these breakers from a hardware standpoint, it's probably equally shared among all the breakers and that it was not anything unique about the two that just happened to be in the main breaker location on that morning, that they all seemed to be the same lack of lubrication since 1972, they had all been accumulating dust, so I understand the need to do it and I think if you want to get it firm, we in OI could run it down.

CHAIRMAN PALLADINO: Don't dismiss those two we do know failed, while others may have failed, we do know those two failed. I think it is important to make sure those were looked at.

MR. DENTON: It is true we have not expended a great deal of staff effort to try to pin down exactly that. It could

be done if the Commission wants to do that. We have approached it -- we have some that were prototypical of the ones that failed and Westinghouse had some and our consultants all got together to look at it. BETA brought in a person from the Navy with their units.

It seems we have a concensus among the people in the area but we will never know absolutely the cause of the failure, but having examined them, the best thing to do is to put in brand new breakers, properly lubricated and properly tested.

CHAIRMAN PALLADINO: You had a rather specific question, didn't you?

COMMISSIONER AHEARNE: I am never extremely enamored with off the top of the head answers in a public meeting.

COMMISSIONER GILINSKY: Let me just follow up on a point you are making, Harold. You said full of dust and they had not been lubricated all these years. At least from one point of view, they have been maintained a month earlier presumably cleaned up and lubricated with what we now know is a reasonable lubricant.

If that is the case, it is a little puzzling why they would have failed and I gather Westhinghouse concluded there was not a whole lot of wear on the breakers. Is that right?

MR. NOONAN: In the Westinghouse letter that I referenced previously, they said there was no significant

wear. What we found was what I would say was significant wear. I think it could be a matter of interpretation between the people that are looking at the particular evidence and what is significant and what is not significant.

COMMISSIONER AHEARNE: Westinghouse as a matter of fact does say in their letter that the one that was sent to them, one of the ones that was sent to them, wouldn't have worked. They say it would not latch as received. There was a bent and deformed spring that could not have been caused by normal operation and wear.

MR. NOONAN: That's correct, sir.

COMMISSIONER AHEARNE: It's not clear to me, are they saying it must have been damaged when it was taken out, it must have been damaged in transit.

CHAIRMAN PALLADINO: May have been tampered with.

COMMISSIONER AHEARNE: They say the device could have been prevented from unlatching automatically, preventing the breaker from opening.

I gather that the conclusion that you have reached is well, since it is a generic problem, the fact that this particular one seems to have that kind of problem.

MR. DENTON: I think it is more that the remedial action didn't depend directly on the precise identification of the problem.

COMMISSIONER AHEARNE: I understand that. I am trying

to draw a distinction between is the plant ready, which is, is the new equipment there, and do we understand what happened. It just seems to me that at least this is one of the ones that was supposedly one that failed and the company that looked at it said, they have a lot of problems with this particular one that isn't really due to normal wear.

MR. DENTON: One of the things that BETA has suggested, if you look in their short term actions, and I understand that's been a conflict, is they recommend that the company get from Westinghouse in writing that this breaker is adequate for the intended service and that the maintenance procedure for that breaker is proper for the service.

CHAIRMAN PALLADINO: This type of breaker.

MR. DENTON: This breaker that is there. Apparently that has never been formally certified in a sense before and that is something that BETA recommends be done prior to the restart, for example.

COMMISSIONER AHEARNE: If I go on with the Westinghouse letter, it says there was a missing lock washer and the adjustment screw then was excessively turned in. I guess one would raise the question, was that a maintenance failure or a lack of understanding of how to use the device.

MR. DENTON: All of the above.

COMMISSIONER AHEARNE: They say the device was lubricated. Salem has advised Westinghouse the lubricant

was added after the event. Here is a failed device that was lubricated and then sent to Westinghouse. They say -- they conclude the wear was not excessive.

MR. DENTON: I guess all we can report back is what our consultant has said and it's history. It failed.

COMMISSIONER AHEARNE: Our consultant didn't have a failed device.

MR. DENTON: That's right, that's what we told the Commission.

COMMISSIONER AHEARNE: Given the repetitive events and trying to keep track of all these things and the sort of shell game that was going on there of which breaker was where, I'm not saying I am faulting you for not having tracked it. I'm just trying to understand what did happen.

MR. DENTON: We can describe it. I didn't know if you wanted us to get the breaker, you know. If you want us to get the two breakers that failed, we'll probably have means to do that.

MR. STAROSECKI: If I could just make one statement. When you are looking at the Westhinghouse report, it refers to the Unit 1 B breaker, and here is where I would like to refer back to what I was explaining before, that after the first trip on the 22nd, the Unit 1 B breaker was replaced with a bypass breaker, and as we noted in the evaluation, bypass breakers have not been getting routine surveillance and

testing, were not getting the maintenance. The breaker in fact as indicated in the Westinghouse report was apparently mechanically constrained in some manner, bent spring, whatever have you. It may be one rationale for why the breaker didn't work because it didn't work on the 22nd and it didn't work on the 25th and it was tested five times and didn't work five times.

That's what can be gotten from that one breaker. I think as noted there are new attachments. There are procedures for how to test the bypass breakers in the future and we are trying to draw a distinction between what was history and where do we go from learning something about that history.

COMMISSIONER GILINSKY: By at least one account, that breaker was maintained a month earlier.

MR. STAROSECKI: That breaker according to our discussions, yes, in January, was overhauled, cleaned, disassembled and whatever.

COMMISSIONER GILINSKY: By the company's account.

MR. STAROSECKI: That's correct. What we do know is there was no specific post-maintenance operability testing conducted on these breakers and if such testing was done, maybe it would have pointed out this kind of deficiency.

COMMISSIONER GILINSKY: Why would there have been any dust or dirt in any of these breakers if they had been maintained? That is listed as one of the causes.

CHAIRMAN PALLADINO: Was the one that was maintained

in January one of those that failed?

COMMISSIONER ASSELSTINE: Depending upon what the answer is on how many of the breakers were actually maintained.

MR. STAROSECKI: Let me assure what our understanding is, based on the discussions we have had with the people who have done the work. The four breakers or one breaker in question, all four breakers were maintained by Public Service employees. The question remains, were they assisted by a Westinghouse representative for one, two or four. Westinghouse has stated the man was there for the work on one trip breaker and one MG set breaker. The people who do the work say they did the work when he was there but he was also there when they did the work on the other trip breakers but there appears to be agreement that he was not there for the bypass breakers.

Similarly, based on discussions we have had with the plant employees, I would just like to briefly touch on the issue of the lubricant. The Westinghouse service representative apparently asked whether station personnel had CRC-2-26 lubricant at the station. They indicated they did not. He apparently went to the car to get a can of lubricant and came back with what the licensee personnel believed was CRC-2-26 since that is what they were asked for, and as we find out in the report, he had a can of Calfonex.

Based on discussions we had with the individual two days ago over the telephone, he advised us that he really

doesn't see a big difference between the two lubricants.

I would just like to give this perspective.

CHAIRMAN PALLADINO: Who was he?

MR. STAROSECKI: The Westinghouse service representative, Mr. Esposito. We talked to him yesterday morning, and his view is he sees no difference, in his mind, between Calfonex and the 2-26.

COMMISSIONER GILINSKY: At one point it was believed that the lubricant contributed to the failure or was one possible cause of a failure, and I gather the later view is it was not or we don't have any reason to think it was.

MR. NOONAN: In looking at the device that we took apart, disassembled and did a failure analysis on, if the CRC-2-26 was used, we would have been concerned because of the fact this is also a solvent lubricant type and the amount of wear that we saw on our device, it would have added to the friction and probably caused the device to malfunction earlier. It wouldn't have caused the failure.

The device sooner or later would have malfunctioned. We just thought that maybe it might have happened at some earlier date.

COMMISSIONER GILINSKY: In any case, that was not the lubricant.

MR. NOONAN: That concern has gone away.

COMMISSIONER GILINSKY: I understand that the

recommended lubricant is no longer commercially available.

MR. NOONAN: That's correct.

COMMISSIONER GILINSKY: The one recommended back in '74.

MR. NOONAN: The one that was recommended in the 74-2 Bulletin, those lubricants were not commercially available since 1976.

CHAIRMAN PALLADINO: Did Westinghouse prescribe a substitute lubricant?

MR. NOONAN: Not in their bulletins. They have now in the latest bulletin, they have provided a substitute.

CHAIRMAN PALLADINO: From the time that lubricant became unavailable until '83, Westinghouse did not prescribe one?

MR. NOONAN: I don't know what they told their service people, sir. I just know from what the bulletin, the service bulletins didn't change.

CHAIRMAN PALLADINO: Why don't we proceed?

MR. DENTON: I guess I need to know what the Commission's desires are in this area. Do you want to investigate the cause further?

CHAIRMAN PALLADINO: I will venture an opinion. I believe we will certainly want to look further into the matter to develop a history that can give us confidence that we have the right kind of a maintenance program. I don't know how

the others feel but I would say that is a different subject, not necessarily related to restart.

MR. DENTON: I guess just to explain where I was coming from on this, it would seem to me that when the breakers are misclassified, they were not treated as safety grade equipment, there is all the chance for mischief in maintaining these. You don't get quality assurance. You are going to get the same people. You don't get the attention. A lot of different things happen with bolts, screws, adjustments, lubrication, the whole thing had lack of attention.

It is very difficult to figure out from today's perspective exactly which one of those was the prime root cause, and that's why we jumped to focusing on what the corrective action or remedial action should be.

CHAIRMAN PALLADINO: There is another thing I read in the material you presented us, and this may have come from Franklin Research, and I don't recall, not only be maintained but periodically they should be replaced.

I am not clear whether or not we have developed criteria for not only maintaining but when they should be replaced. This may be one of your items.

MR. NOONAN: This is one of the things that is sort of a result of our investigation, looking at these undervoltage trip attachments and what we have seen. We questioned whether or not these things should be in there for very long

periods of time. We have asked the licensee to propose a replacement program to us. There is going to be a verification test that we have required the licensee to do and when all these results are brought in, we will look at replacements.

MR. DENTON: One other important aspect in my thinking was we have proposed in the order to installation of diverse breakers, breakers of a different type, so that we are not relying on just one manufacturer's single breaker which has the potential for common mode mistreatment, and that is the reason for having in the order the proposing of installation of diverse breakers.

COMMISSIONER ASSELSTINE: To what extent does the surveillance/testing requirements also contribute to identifying the potential problems with the things that will wear out and replacing before they do? Is that another element?

MR. NOONAN: That would be another element that we have. We have surveillance and testing now both for the shunt coil and the undervoltage trip attachment. There will be a timing test associated on a monthly basis. What we are looking for there is if the breaker is taking longer and longer to open, which would indicate maybe a degradation of the device.

That information will be blended in with what we get out of the licensee's verification testing. At the end of all that, we would more likely prescribe some type of

replacement.

COMMISSIONER AHEARNE: Let me get back to the Chairman's question. He was referring to a report from our consultant, Franklin Research, Appendix B to your paper, the interim technical evaluation report, page three of that particular interim, and this is now Franklin reporting and they say "Westinghouse Switchgear Division personnel also indicated that the undervoltage trip attachment must be replaced some time during the life of the plant. Criteria for determining when to replace the attachment did not appear to be available."

I wondered whether you had followed up on that idea?

MR. DENTON: I think that was part of the purpose for these ongoing tests, to develop some of the information needed to establish the replacement intervals.

MR. NOONAN: We had a generic meeting with the Westinghouse people on March 18th. In that meeting, we were basically talking generical, we were not specifically talking about Salem.

In that discussion, we talked about how the device is manufactured and all the things we wanted to know about how the device is made. It came up that these devices probably should be replaced at certain intervals but there was no frequency schedule given to us by Westinghouse.

COMMISSIONER AHEARNE: The report from the consultant of April 7th says that Westinghouse people said it must be

replaced, not just probably but must be. I wondered whether as a result of this report from the consultant, you intend to issue some kind of a query of Westinghouse whether they intend to develop this criteria.

MR. NOONAN: We have brought that subject up briefly. We have not sat down with Westinghouse and talked with them. We have asked -- I have talked to Mr. Rawlings from Westinghouse in Licensing, and we want to sit down and also discuss the results of the testing they did and we will be talking about your subject.

CHAIRMAN PALLADINO: I think perhaps more important at the moment, is this a commitment to which the staff and the licensee have agreed, that we are going to establish some criteria for deciding when they are going to replace these.

MR. NOONAN: It is a commitment between the staff and the licensee. It is not a commitment between the staff and Westinghouse.

MR. CASE: The licensee will go back to Westinghouse.

CHAIRMAN PALLADINO: Are we assured that these criteria are going to be developed and are they part of your long term?

MR. NOONAN: This is part of the verification testing program we have been talking about. That data will be integrated into determining what this replacement interval should be.

COMMISSIONER AHEARNE: Of course, Westinghouse -- the significance that I see is that the Westinghouse Manufacturing Division that manufactures this piece of equipment is saying that piece of equipment must be replaced during the life of the plant, not during the life of Salem, obviously, it is the life of any plant which has that particular piece of equipment.

MR. EISENHUT: There is an item explicitly in our order on one of the longer term actions is required to be completed by May, 1983, the licensee is required to provide us with a detailed test program. We are going to be reviewing that program. That isn't enumerated specifically under the order but we certainly have the intention to continue the discussions with Westinghouse and make sure we have the latest Westinghouse position in connection with that program.

COMMISSIONER ASSELSTINE: Isn't that something that needs to be addressed as part of the generic review?

MR. MATTSON: We met with the Westinghouse Regulatory Response Group on Monday of this week for the second time in the life of the Generic Issues Task Force, looking at the broader implications, and discussed with them how this particular problem and some other problems that we have with the breakers and the trip attachments were going to be addressed over the coming months.

It's clear to them and clear to us that one of the things that has to be done is to develop a life cycle in the

criteria associated therewith, for all these plants.

Westinghouse knows it. The owners know it. They are already at work on it. One of the requirements that the staff will shortly conclude that is needed generically will be this very requirement. You should see that next week.

COMMISSIONER GILINSKY: May I return to the Franklin Institute for the moment, your paper for today. It has the statement that their evaluation consisted of the inspection of a failed UV trip attachment and was based on interviews and so on. Is that correct?

MR. NOONAN: I'm sure where you are reading, sir.

COMMISSIONER GILINSKY: Middle paragraph of page three.

COMMISSIONER AHEARNE: 98-E.

COMMISSIONER GILINSKY: It says "Their evaluation consisted of the inspection of a failed UV trip attachment and was based on interviews with cognizant maintenance personnel to describe the maintenance history of the devices."

MR. NOONAN: On March 3rd, when we first went to the site with the Franklin people, we looked at a UV attachment that was identified to us by the licensee as one of the failed units, one of the failed trip attachments.

COMMISSIONER AHEARNE: You concluded that meant that was what they had at Franklin.

MR. NOONAN: No, what it was was an inspection of that particular unit.

COMMISSIONER AHEARNE: It's a reasonable conclusion.

COMMISSIONER GILINSKY: It seems like that is something worth checking, whether that in fact was one of the ones then sent to Westinghouse. Did Westinghouse get theirs subsequent to that date?

MR. NOONAN: Yes, sir. I think where you need to look is in Appendix B of the Westinghouse -- the one right above there, FRC has completed their interim report and a copy is included as Appendix B. You will find in that Appendix B that the device that was looked at by Franklin has been identified as Salem 2, Unit B, B breaker.

COMMISSIONER GILINSKY: Not the one they subsequently ended up testing?

MR. NOONAN: We only looked at that on March the 3rd and we did a visual examination of that unit.

COMMISSIONER AHEARNE: Since you are still on Franklin, let me ask you a question with respect to the --

COMMISSIONER GILINSKY: That was not as clear as it might have been in the report.

COMMISSIONER AHEARNE: Appendix E, Franklin says "Shortly after February 25th event, all but one of the failed devices were lubricated. The remaining failed UVT attachment was subsequently damaged and was not available for inspection."

What does that sentence mean?

MR. NOONAN: At this point in time, on March 3rd,

we were identified as having two undervoltage trip attachments, one that we saw physically and one that was in the hands of the NRC people at Region One. That was on March 3rd. That is the one that was damaged. "Damaged" means it was cycled quite a bit and we did not want to use that particular device.

COMMISSIONER AHEARNE: Was not available for inspection; you mean one of the ones that had failed was in the Region?

MR. NOONAN: At that time, we thought it was, sir. Subsequent to that, we know and we have been told that was not a correct statement.

COMMISSIONER GILINSKY: What was not correct?

MR. NOONAN: Mr. Toman reported in his report here that we were told that by the licensee on March 3rd that we had one device at the site that we looked at, and we said we inspected it. The second device, the second failed UV trip attachment was reported to be with the Region people. That was told to us by the licensee at that time. That subsequently was corrected and we found out that both of the failed devices were with Westinghouse.

His statement here was based on what he had received at that time.

COMMISSIONER AHEARNE: At that time, both the failed devices were at Salem?

MR. NOONAN: No, sir. Only one was at Salem.

COMMISSIONER AHEARNE: They sent them to Westinghouse in two separate shipments?

MR. NOONAN: I don't know, sir. That I don't know.

COMMISSIONER AHEARNE: You had just finished saying that Franklin has inspected one of them, the failed units.

MR. NOONAN: One at the site.

COMMISSIONER AHEARNE: The other one wasn't there?

MR. NOONAN: It was not, sir.

COMMISSIONER AHEARNE: Westinghouse has them both.

MR. STAROSECKI: Maybe I can clarify it. When we were there February 26th, we were allowed to take a UV attachment with us for examination in the Region and we also brought it to Headquarters so people could see what we were dealing with. We were informed at that time on the 26th that was a failed breaker.

The key issue is who do you talk to and who is the individual telling us this information. Obviously we had a technician who let us take one and said, this is one of the failed ones. Subsequently, that was corrected.

COMMISSIONER AHEARNE: Subsequently, you found out that was not one of the failed ones?

MR. STAROSECKI: As I think was indicated, now we are told that was not one of the failed ones. The purpose we had originally was it was a complicated device, how to explain it to someone without actually looking at it is very difficult

so we wanted one that everybody could have a look at.

COMMISSIONER AHEARNE: As they always say in the old mysteries, don't anybody touch the evidence.

COMMISSIONER GILINSKY: Let me take you over to the March 10th paper, 83-98, on page five, under the heading "Identification and Cause of Failure," there is NRC action, short term; NRC action, long term. The short term was to conduct an initial investigation of the cause of the UV trip attachment failures by visual examination of the devices by qualified personnel and determine how the devices were maintained.

NRC action, long term, is NRC will conduct laboratory testing and examination of the failed attachments to determine the precise cause of failure if possible. Testing and examination results will be used as a basis for future maintenance, surveillance.

MR. DENTON: I think we are making a lot to do over this. I think basically what happened was --

COMMISSIONER GILINSKY: I was going to ask what you intended.

MR. DENTON: What we intended was to get a failed breaker. The licensee gave us a breaker. We thought it was a failed breaker. He said it was. We took it back to test it. Later on it turned out not to have been a failed breaker. He said it wasn't. They were both at Westinghouse.

It seems to me that is what happened. Maybe we should have done it a little bit differently but overall, we went to get a failed breaker. That is what we thought we had and then it turned out it wasn't a failed breaker.

CHAIRMAN PALLADINO: Commissioner Gilinsky has a somewhat different question than that.

COMMISSIONER GILINSKY: That was tied to reaching certain conclusions about future maintenance, surveillance, and/or requirements for UV trip attachments. You attach a certain importance to that.

MR. NOONAN: Let me explain that statement. Again, on March the 3rd, we were at the site. We were told that we were looking at a failed device and the Region had the other device that failed. We had planned to use the one at the Region. That was our initial intent.

Subsequently, we found out afterwards that the device that the Region had was damaged due to handling and we decided that we could not use that because it would bias our results.

We went back to the site and we got the device out of Unit 2, because we knew we no longer had a failed unit. After that, we found out the device that we thought we had was not one that failed.

COMMISSIONER AHEARNE: I am still a little concerned. Originally I thought the point was it didn't make any difference whether Franklin looked at a failed unit or not.

MR. DENTON: That is still my position.

COMMISSIONER AHEARNE: The sense I was beginning to get from the recent couple of minutes is that originally you people thought it was important.

MR. DENTON: It certainly is desirable.

MR. NOONAN: Desirable, sir.

MR. DENTON: We always try to get -- in steam generator tube failures, we got a failed breaker, we think, from San Onofre. I am now beginning to wonder if that one is really the failed one. We thought we had a failed one here. It was not a big deal when you are handed one and you are told this is one that failed, that's great. That's what we were going to work on. It turned out it was the wrong one. We had concluded in view of everything we learned about this, that precise breaker was not material. If you think it is -- it is clear that we have not looked at either of the two breakers that are now thought to be failed. They are at Westinghouse. We are certainly prepared to go look.

I guess rather than argue the point, we ought to decide if you want us to examine those two and we will ship those to Franklin.

It turned out that we had not gotten those two and the documents vary. When they were written early, we thought we had and when they were written late, it turned out we hadn't.

I don't know what the source of confusion on this

point is with the Commission. It was not that we were trying to mislead you. We were trying to represent in time what we thought we had and that changed.

COMMISSIONER AHEARNE: I understand that.

CHAIRMAN PALLADINO: This is what led me to suggest that we pursue this as an item of history for what benefit it can provide us in guiding future actions.

Let me suggest we try to go on.

MR. DENTON: Onward gets to what I think is the more interesting part of the question. What do you do as a result of these breaker failures?

What was done, as I mentioned, all new breakers are put in and carefully looked at, which Westinghouse endorsed. We came out with a verification testing program. That includes both shop testing and in-place testing. It includes timing. It includes looking at all four, not just the main breakers but also the bypass breakers and coming out with maintenance surveillance procedures that should have been in place all along.

I think from the equipment standpoint, what is in there is what the vendor recommends, it is the best we know how to use those breakers.

COMMISSIONER ASSELSTINE: Is it fair to say that the composite of the corrective actions that you have required cover the entire range of possible causes of the breaker

failures that have been identified either by Franklin Institute or by Westinghouse?

MR. DENTON: If you go to what we have in the order which is requiring diverse breakers in the future, I consider that during the time interval here that we carefully watch and test these breakers to be sure they are all working and then with the operator back-up that we will get to eventually and with the order for diversity, I think we have covered it.

It is still possible the failure mechanism is undisclosed and we may learn more tomorrow after more testing.

COMMISSIONER AHEARNE: Just as a comment, it is somewhat ironic that one of the threads that occasionally seems to have been drawn was that perhaps a cause of the failure is because this particular design was not made for a lot of usage.

One of the things we are going to do is to make sure we test it all.

COMMISSIONER ASSELSTINE: Yes.

COMMISSIONER AHEARNE: If it does fail from a lot of usage, there is some kind of a curve that says probability of failure increases with usage. Therefore, our solution is going to increase the probability of failure.

CHAIRMAN PALLADINO: That is why we were so concerned and interested in the criteria for replacements.

MR. DENTON: I think they are both valid. At the

same time, you don't want to put it in and not test it. That's the error we made the first time. Now you have to test it but then you have to recognize testing will wear it out and come up with a replacement scheme so you replace it before it's worn out.

COMMISSIONER AHEARNE: That is why it is very important to get the criterion established on how frequent usage before it should be replaced.

MR. DENTON: That was recognized in the BETA report to the licensee and as Vince said, that is intended to be generated through these long term wear out tests. I think they are testing some 2,000 cycles.

MR. NOONAN: It was we originally said 2,000 cycles. The licensee has to take a look at that and decide if 2,000 was enough or maybe they were even going to do more.

COMMISSIONER AHEARNE: You take one piece of equipment and you test it to "x" cycles and you can draw some general conclusions about the general piece of equipment but you are really confident in saying, you test that one to failure, that the one you had will fail after so many cycles. I'm not sure how testing one piece of equipment that many times is material, how valid a sample you now have in order to draw the conclusion of the reliability of a replacement.

I think as Westinghouse has already told you, one of the similar devices went 8,000 cycles.

MR. NOONAN: That's right, sir. That's correct.

CHAIRMAN PALLADINO: I do think you need some statistical sampling.

MR. NOONAN: We have given that consideration. We talked about it in the report but that is only on one device. We are talking about a sample of one.

MR. DENTON: We should bear in mind we have these same breakers in the other operating PWR's. Here we thought we would be getting in at least comparable or better shape then in the others by going to new breakers, test and install.

If you really have serious concerns about these breakers performing, it goes far beyond just this plant.

COMMISSIONER AHEARNE: That's right.

MR. DENTON: That's the generic issue.

COMMISSIONER AHEARNE: That is why it is important.

MR. DENTON: We didn't intend to solve the generic problem here.

COMMISSIONER AHEARNE: I would reinterate the point I tried to make earlier. We have a manufacturer's representative saying this piece of equipment has to be replaced during service life. I think it is obligatory on us to make sure that a criterion is established. I am concerned about trying to establish it off one piece of equipment.

CHAIRMAN PALLADINO: I think Westinghouse has had enough experience with other devices to know that is not a

good practice.

COMMISSIONER AHEARNE: Yes.

(SLIDE.)

MR. DENTON: The second issue I wanted to discuss is human factor issues, procedures, training, operator response, those kinds of things.

In our report, we cover these areas. They are also covered in the order, items (b)(1) through (3). You will recall a discussion of the new procedure to make clear the use of the first out panel, the mimic status panel. It requires there are two demand signals for scram, that the operator manually scram.

Operator training to be sure they understand the use of the first out panel and mimic status.

COMMISSIONER GILINSKY: Is this the heading under which you deal with scramming on annunciators?

MR. DENTON: Yes.

COMMISSIONER GILINSKY: That seems to me to be a questionable item.

MR. DENTON: Let me have Hugh explain what the present procedure calls for.

MR. THOMPSON: That was an issue which we looked at very carefully with the utility, evaluating the reliability and the adequacy of his indicators to ensure that the operators could rely on their instrumentation. His proposal that we

reviewed was to rely both, not just on the annunciator but the first out panel, which was the annunciator, plus the solid state protection system, mimic panel, which would provide the operators with a positive indication there was a valid demand for a reactor trip presently existing.

We looked at the reliability of the power supply and we looked at that as it related to the information and how readily available was that to the operator, and both the utility and our staff evaluated that did provide the operators reliable information to take action to manually trip the plant if a valid reactor demand signal had been received and a reactor trip had not occurred.

COMMISSIONER GILINSKY: Would we require this anywhere else?

MR. THOMPSON: We will be looking with that as part of the overall emergency procedure upgrade. We are looking at these issues now, on a technical basis. All other panels may not be the same. For instance, Salem does have a reactor protective system, solid state protective system, mimic panel that the others do not have. This is a fairly unique control room in that regard and the information is available to these operators where it may not be available to the operators in an older control room.

MR. DENTON: As part of our generic look, we have asked each of the owners to address that question and I'm

sure it will be addressed in Roger Mattson's report.

COMMISSIONER GILINSKY: I noticed that was a highly reliable panel but it doesn't seem to me it is a fully safety grade system, annunciators and mimic panel. I'm not an operator, to the extent that we are getting into technical areas in which I don't have any detailed experience and I don't think others here do either.

It seems to me if the annunciators tell you when you start looking at your instruments right away, but which are safety grade, and to act on the basis of what your instruments tell you. That is what operators have been trained with all these years and I think that is a sensible approach.

Both are important, the annunciators and the instruments. Ultimately, you have to make your decision on the basis of the safety grade instruments.

To shift this, to take actions on the basis of other kinds of indications, it seems to me to be a questionable direction.

MR. THOMPSON: We agree it was an unique step and we looked at it very carefully. There were debates among the staff as to what the appropriate step should be to rely upon and we evaluated that instrumentation in as much detail as we could by doing site visits, looking at exactly where the by-stable information came from, looking at the location of the light bulbs and ensuring there were procedures to test

those on each shift and to make sure the information was available to the operators and to ensure there was an adequate and reliable power supply.

Both we and the utility concluded that information there was sufficiently reliable for operators to take action. Obviously the training program was geared to that procedure and we feel that the procedures now have been walked through by the operators and we have confidence they can use that information and use it properly in taking manual steps to trip the reactor.

COMMISSIONER GILINSKY: My own sense of this is it is something that sounds good, somehow we are going to get the reactor tripped faster. It involves a new direction in terms of how people are to run plants.

I guess it's one I'm not entirely comfortable with.

MR. THOMPSON: This decision was based on the specific design of the instrumentations at Salem. It is not intended to be a generic application, the aspects of the generic aspects will be looked at elsewhere.

COMMISSIONER GILINSKY: It is a very fundamental notion, do they act on the basis of annunciators or do they act on the basis of their safety graded system.

MR. THOMPSON: It is not just on the basis of annunciators.

COMMISSIONER GILINSKY: I understand there is a mimic

panel and so on.

MR. THOMPSON: I think that is an important difference, Commissioner.

COMMISSIONER GILINSKY: It's an important addition and they do have a reliable system there.

CHAIRMAN PALLADINO: You are saying we are not going to check their safety grade instrumentation?

MR. THOMPSON: It will not be necessary for them to wait and check safety grade instrumentation, once they have verified there was a valid reactor trip demand signal that exists. They don't have to sit around, I wonder where it is. To start checking your safety grade instrumentation, then you have to look at what was the specific indicator that required the trip. That panel has a number of some 20 odd trip signals that are up there that would require the individual first to recognize what that trip is and then go and find that instrumentation, where we feel if there is in the Salem plant, sufficient information for him to do that based on the mimic panel, which would give him a valid indication of where an existing trip demand exists from the panel itself.

MR. DENTON: I understand the objective for this. We think the objective has been met, that once the operator determines there are two demands, at least two demand signals for a scram, he acts and in most cases this should reduce

the time for operator reaction to less than 30 seconds which they took the first time. It is moving toward faster operator action. It still provides them a check to be sure he is not scramming the reactor on a spurious signal but it does not require that he run down mentally and identify the exact call.

COMMISSIONER GILINSKY: The key word is "valid." If there is a valid signal, the question is how do you decide there is a valid signal? Putting the reactor into a scram is certainly you do not want to do casually because you are putting the reactor into a violent manuever. You are putting the people in the control room in a high state of aggestation. That is when you can have mistakes happen.

You do that when there is the kind of emergency that requires that you shut the reactor down quickly.

MR. DENTON: That is why they went to two demands.

We understand the concern. I have learned that the Japanese only get one or two scrams per 12 month period in their plants. Our utilities historically experience on the order of a scram a month or more, that or spurious scrams. Each are a challenge.

It is not the intent of this procedure to increase those challenges.

CHAIRMAN PALLADINO: Would it increase the challenges?

MR. THOMPSON: We don't think it would because we

see the only time that would occur is when a valid scram signal exists and the protective system didn't work. We don't think that the number of demands that the plant would have gone through is any more than what would have occurred if the system functioned properly.

COMMISSIONER AHEARNE: I gather what you are really faced with is that 60 to 90 second or 100 second problem that you had talked about the other day and that Westinghouse has verified.

COMMISSIONER GILINSKY: I think Harold raises a very interesting point in talking about the Japanese plants. They are very, very careful about the way they maintain the plants. After a 12 month period, they go down for three months and maintain everything every carefully. When they go up again, they have a relatively small number of scrams.

Salem happens to have an unusually large number of scrams. It seems to me that the way to deal with this problem is to get at the root of why Salem has a lot of scrams, far more than the average plant here. That is the way to deal with this problem.

I think you don't want to get the operators into the mode, an unthinking mode. You want them to be in a thinking mode. In fact, reacting to their safety grade instruments when you do get into a situation of this sort.

MR. THOMPSON: Clearly, we do want the operators

to be in a thinking mode and in fact that is why we went and tried to identify those instrumentations we wanted them to rely on in this particular case, as far as the large majority, we are not changing any operating philosophy procedures. It relates just to this reactor protective system and the events that were identified at Salem.

We looked at it very carefully, Commissioner.

COMMISSIONER GILINSKY: I understand your view. I guess I am not persuaded.

MR. DENTON: Shall we move onto the third area?

COMMISSIONER ASSELSTINE: Before you do, I have a couple of questions about the second area. I have a question both on pages 12 and 14 of 98E. You identify a number of human factors deficiencies, both in the control room in terms of the auditory signals, the annunciators, color of the annunciators and the method for silencing and acknowledging the functions and also on page 14, in the reactor trip procedures for Salem, one of the questions I have is the extent to which either one of those items or both of them was looked at in the NTOL review for Unit 2, and if the same kinds of problems were found there. If so, is this a situation where the licensee did not go back and correct those problems for Unit 1?

MR. THOMPSON: We did not identify these specific items in the NTOL review for the control room, detailed control room. Our general evaluation of that control room,

which is one of the first ones we did, we didn't have a lot of experience at that time, was this was one of the best control rooms we had done.

COMMISSIONER GILINSKY: That is what I remember being told.

MR. THOMPSON: I will reaffirm that was our opinion and again it was one of the -- we were on a learning curve at that time. We did not identify these particular deficiencies for the Unit 2 NTOL review.

COMMISSIONER GILINSKY: I must say in fairness, in observing myself, I went up there at the time and came away with that impression.

COMMISSIONER ASSELSTINE: Is the same thing true for the reactor trip procedure, the weaknesses in that?

MR. THOMPSON: The reactor trip procedure that we looked at originally we thought was valid. We did not have the difficulty. We weren't aware that the operators would have a confusion associated with the reactor protective system.

I must admit that in our evaluation of reactor operators, we had never gone down to the level of detail of examining the operators, specifically of what the difference between a confirmatory signal or demand signal. This was one of our -- we tended to ask them of their knowledge about where the signals came from, but to the detailed level of

knowledge, it was indicated by this event. We had not been asking operators for that in detail.

COMMISSIONER GILINSKY: Were they confused on the basic point that you get the annunciator signal and you look at your instruments in that category?

MR. THOMPSON: They clearly took a fairly long time to look at their instrumentation to decide what action to take.

CHAIRMAN PALLADINO: We spent a lot of time criticizing that.

MR. THOMPSON: On the first event, where lots of alarms were going off, there was lots of confusion and in fact they had gone down to the low level alarm person. They were trying to control manually the feedwater. We think the operators' response, at least up to the decision to manually trip was prompt, it was fully satisfactory. There may have been some questions about how quickly they reset the first out panel and lost some information that would have led them to have a better post-trip review procedure.

We think their actions in handling the transient were prompt and fully satisfactory. We did think the event on the 25th, that there were some deficiencies, but we thought their actions were reasonable, certainly adequate to protect the plant and public safety but there were some deficiencies identified in the training program and the procedures that would have led them to a more prompt response

and that is what our whole evaluation section was based on, those activities.

COMMISSIONER GILINSKY: Where is the slowness? Didn't they turn to their instruments?

MR. THOMPSON: That's correct. They elected not to rely on the first out panel as their valid indicator. They elected to then look at a number of other activities.

COMMISSIONER GILINSKY: Valid indicator of?

MR. THOMPSON: Of a valid reactor demand signal being present.

COMMISSIONER GILINSKY: Isn't that reasonable as far as their own action is concerned?

MR. THOMPSON: Certainly, based on their training at that time, that was very reasonable; exactly.

COMMISSIONER GILINSKY: But reasonable in any case, it seems to me, don't you think?

MR. THOMPSON: Both the utility and the staff have looked at an alternative approach. We think an alternative approach is also reasonable. In fact, maybe more reasonable.

COMMISSIONER ASSELSTINE: I had one other question along those lines. I gather that in making the decision the plant operations can continue until we resolve the ATWS unresolved safety issue, that we have tended in the past to place a good deal of reliance both on procedures and training and operator reactions to deal with these situations.

Is that basically right?

MR. THOMPSON: Obviously, the ATWS, there has not been a technical solution imposed and therefore the operator is the primary line.

MR. DENTON: I don't think that would be my characterization. I think it was -- not that I am disagreeing with the Commissioner -- it is not that the reliance per se on operator actions. I think the industry has maintained that the probability of these breakers failing was so low and we had a different value and it was more an argument over what the probability of getting into an ATWS that prevented us from coming to a resolution of it then it was with regard to the operators' response side of the question.

COMMISSIONER ASSELSTINE: Since my premise is flawed, I won't go on with the reflection about whether the experience here would tend to support or undermine the assumption that you made.

COMMISSIONER GILINSKY: I have a question about the annunciators.

CHAIRMAN PALLADINO: You say the licensee has stated that each licensed operator will be required to perform steps in the process of checking out procedures, by means of simulator exercise prior to restart.

Is the simulator in this plant complete enough to do all these things? Are they going to do it at another plant?

MR. THOMPSON: Primarily what we were trying to do was get testing there on either their existing control room or on a simulator from the control panel itself. That is where is the instrumentation located and what should they be looking for and kind of like actual body testing.

CHAIRMAN PALLADINO: I understand they have a simulator almost near completion.

MR. THOMPSON: The simulator itself is not operational to the place that it accurately reflects the transient. What we were trying to do is walk them through, a kind of walk through and talk through in a control room environment as opposed to a classroom environment where it is chalkboard and write it down on a piece of paper.

CHAIRMAN PALLADINO: My question was specific since you are going to do this by April 12th.

MR. STAROSECKI: Salem is getting a simulator ready. They do not have one operational now. They have the hardware installed. They hope to check it out by August. For the timeframe we are talking here, it is going to be either in the control room or a mock-up.

COMMISSIONER AHEARNE: In your report you say "or simulator exercise" prior to April 12th.

MR. THOMPSON: It is a walk through/talk through type exercise that we are talking about.

COMMISSIONER AHEARNE: I was just focusing in on

what the Chairman was asking. You say "or simulator exercise" prior to April 12th. I would conclude there is no possibility of a simulator exercise.

CHAIRMAN PALLADINO: There may be a mock-up, he said.

MR. THOMPSON: In the sense that the simulator is responding as the plant responds, that is correct. It is my understanding at least from discussions we have had that we were talking about a walk through/talk through type of approach as opposed to actual what you could do in the control room as well as the simulator.

COMMISSIONER AHEARNE: The phrase actually is "in a control room or simulator exercise."

CHAIRMAN PALLADINO: On page 14, you talk about human factors, review of procedures. There are a number of human factors' discrepancies identified, including lack of internal consistency, logical ordering of steps and convention used for emphasis. None of these discrepancies warranted revision prior to restart, many of these discrepancies were corrected in the April 6th revisions to these procedures.

I am not quite clear. Are you saying none of these warranted revision? They sound important to me.

MR. THOMPSON: Typically they don't result in what we would say is a significant safety hazard by the way they were presented here. We look at a large number of the procedures and find just drafting errors, sometimes

presentation type errors. Some we feel are important if they really mislead the operators and others are those which can be easily upgraded but as to having a technical basis to require procedural changes, we didn't feel --

CHAIRMAN PALLADINO: When you say none of these, that sounded --

MR. THOMPSON: My discussions with the staff indicated they felt comfortable that the procedures did provide operators sufficient instructions to operate the plant on but they could be improved. It is not the best they could be but they were adequate.

COMMISSIONER AHEARNE: It will lead to a general question. Let me refer to the sections before it on some of the human factors' issues. I will start on page 16, on training and revised procedures.

You say that the trainees were asked to list the seven steps an operator is required to perform to manually trip the reactor. Operators are required to have these steps memorized. You go on to say that a random sampling of five test results showed that four failed. These four as well as the others, no retesting was required and no remedial assistance was provided.

You go on to say that on April 7th, in a letter, the licensee stated that corrective action would be taken. You go on to say that the training of the auxiliary operators

for a set of tasks is not evident. The licensee has committed in this letter of April 7th to do it right. You go on to say on training on the reactor protection system that all trainees should have been required to do certain things, they weren't and the licensee has stated in the April 7th letter it will be fixed.

You go on to say that in the overall training evaluation, there were two versions of the final examination given to each, one of two versions was given, and you say it is evident that the two versions did not test the same subject matter.

The licensee stated in its April 7th letter that it will be fixed.

Your final conclusion is that based upon the completed training actions and commitments, the staff concludes that the training program is acceptable for restart.

My overall question really is you have documented here a series of actions which I thought there had been some agreement that the licensee was going to do certain things, obviously do them right, you looked at what they did and concluded they didn't do it right.

The licensee has come back and said, we will do it right and it appears that conclusion is therefore, since the second time they said they will do it right, then it's okay.

I am uneasy about reaching that conclusion, if you had said we have now rechecked what they have done and they have done it right, that would be better. It would be acceptable. I at the moment do not find it acceptable since you have already found they didn't know what to do to just take their statement that they will do it right this time.

MR. THOMPSON: Commissioner, I agree with you. It clearly gives us a higher degree of confidence if I go back up and recheck. I certainly don't have a problem with doing that.

Let me tell you --

CHAIRMAN PALLADINO: Is it your plan to go back and check?

COMMISSIONER AHEARNE: He hadn't intended to.

MR. THOMPSON: We are working on a schedule that would have made it difficult for us to recheck it before this meeting.

CHAIRMAN PALLADINO: You might have said in there you had plans to do it.

MR. THOMPSON: We could have done that.

MR. DENTON: Having flagged these issues and the licensee committing to do them, we were relying on the commitment and the inspection program to follow up and audit the system. We don't check every commitment.

COMMISSIONER AHEARNE: Aren't these the kinds of steps that you had some sort of informal agreement that the licensee would do these things prior to restart?

The point I was trying to make is this reads and maybe it is just misleading. It reads as though you and the licensee have discussed certain training that was going to be required to be done, you thought they had gone ahead and done it and you checked what they had done and it turned out a lot of the things they had done weren't adequate.

Now you have another commitment from them, this time in a letter, they will do it right. The difficulty I have is that you have already seen they didn't do it right the first time so why should we be confident that the second time they will do it right?

MR. THOMPSON: Let me address the issue.

As a follow-up, if you will remember, I said the last time I was before you, we will be looking at this particular plant and their training program as a part of their requalification testing, which will be done later in May.

I did plan to go back up at that period in time to check out and insure that the ongoing program in this area was sufficient.

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MR. DENTON: Some of these items are covered in the order, also, I believe.

MR. THOMPSON: That is correct. They are covered in the order. Again, it is like Commissioner Ahearne says, there are dates that this thing is to be completed by that I personally sign off.

CHAIRMAN PALLADINO: I am going to suggest that we take a ten minute break and then come back

(Whereupon, a short recess was taken.)

CHAIRMAN PALLADINO: Let's reconvene the meeting. I understand that Cwomissioner Gilinsky had another question and when he gets here, we will pick it up.

You were prepared to change the area.

MR. DENTON: I would like to answer a question Commissioner Asselstine brought up and let me answer it more fully. I do think that the events that happened here do call at least for this plant to address the ATWS issue and that is what the order is intended to do is because both to breaker failure and some of the human shortcomings that have been observed here, I think we do need to impose on this plant an ATWS fix and that is what is contained in the order.

COMMISSIONER ASSELSTINE: Those are the two elements that must be completed within 60 days?

MR. DENTON: No. It is a commitment to instal automatic turbine turbine and the diversity of the breakers to try to preclude the occurrence.

COMMISSIONER AHEARNE: Since you raised that again, Harold, let me follow up and ask you on that, the BETA Report recommended diversity of breakers meaning breakers of two different manufacturers. I read what you have here in the order is as diversity in tripping the breakers. You say, for example, "by incorporating the breaker shut trip function into the automatic trip circuits." That is different than the two different breakers.

I thought you said earlier before our break here, it led me to conclude that you might be interpreting this as two different kinds of breakers.

MR. DENTON: I guess I was opened to be convinced. I would prefer breakers of a different manufacturer to get as much diverse as we can.

COMMISSIONER AHEARNE: But that is not necessary in the way the order is worded.

MR. DENTON: That is correct. I had assumed that is what they would do in response to the order but it is not precise.

COMMISISONER AHEARNE: For example, could not they do exactly what you had given as an example and still not go to the second manufacturer?

MR. DENTON: It is possible they could.

CHAIRMAN PALLADINO: You may have to fix that up a little bit. Commissioner Gilinsky had a question.

COMMISSIONER GILINSKY: I had a couple of questions on the annunciators. One of the things that I observed when I went up to Salem was that if you acknowledged annunciators, you acknowledged all of them at once which meant you turned off the sound and the flashers.

It seemed to me that the first-out panel, the trip panel, ought to be handled separately so when you are turning off the sound of a lot of less important annunciators, you are not at the same time losing the flashing on the first-out panel. Are you dealing with this here?

MR. THOMPSON: Yes, sir. That is one of the issues that we will cover in the detailed control room design review.

COMMISSIONER GILINSKY: Why isn't that just changed right now? Is that a difficult thing to change?

MR. DENTON: Let me answer that question.

COMMISSIONER GILINSKY: It seems to me to be terribly important.

MR. DENTON: I hesitated to make a change for a specific problem. We have been accused of rushing in to fixes in the past. I agree completely with the idea that it is a problem but I thought it ought to be evaluated in the broader text of the control room review to be sure that while we were fixing it for this, we weren't making it worse for something else. That was the only reason for postponing it until we could get the control room review looked at in toto.

COMMISSIONER GILINSKY: You are talking about putting

a plant back in operation and what you have there is a situation which I am afraid is shared in a lot of other places as well which is that operators turn off these annunciators because they are just making so much sound and there are so many things flashing, you can't think and you can't act. There is something very wrong with these control rooms. But that one has this special problem in particular which I think needs to get cured.

MR. DENTON: We don't disagree it is a problem. It was only the timing.

COMMISSIONER AHEARNE: I guess I tend to share your view, Harold, in the sense that we have at times some times unjustly and, I think, justly been accused of rushing in to fix one thing and not recognize the broader. What is your schedule in which you would have that control room design?

MR. THOMPSON: Each utility is to submit, in fact, I believe it is tomorrow, their plant-specific schedule in response to the generic letter 82-33 which includes the detail control room design review and those portions, I understand, at Salem are fairly far along and advanced in their area, but those schedules would be negotiated on a plant-specific basis by the project manager. So it would depend on the other activities that they have to do. It is not a fixed schedule at this time.

COMMISSIONER AHEARNE: You are saying that that

schedule is supposed to be submitted tomorrow?

MR. THOMPSON: That is correct.

COMMISSIONER AHEARNE: So it would be very shortly that you would be in a position to say when that would be done for Salem, is that correct?

MR. THOMPSON: That is correct. I could certainly say when their detail control room design review would be completed and their summary report submitted to NRC for review and evaluation of all those changes they intend to initiate and, in fact, identify those which they don't intend to and see if we agree and then as a part of that would be a schedule established for the implementation of those they do intend to fix.

COMMISSIONER GILINSKY: Is this getting caught up in the broad review of all the plants?

MR. THOMPSON: Correct. It is part of the response to the Commission's overall order on supplement one to NUREG-0737.

COMMISSIONER AHEARNE: But it is a plant-specific control room design review, isn't it?

MR. THOMPSON: That is correct. It is a plant-specific control room design review which comes under the umbrella of the Commission's major directive to look at control rooms.

As Commissioner Gilinsky says, it is not just

Salem that has this particular design feature and all of them have lots of alarms.

CHAIRMAN PALLADINO: But you will be coming up with a specific schedule for Salem?

MR. THOMPSON: That is correct. The negotiations will start between the project manager and the licensee once his overall schedule is sent it. It includes the control room, the SSPS installation and the emergency operating procedures, the Reg Guide 197 instrumentation.

COMMISSIONER GILINSKY: Are we talking about years?

MR. EISENHUT: For the establishment of that schedule?

COMMISSIONER GILINSKY: For the whole thing.

MR. EISENHUT: I think there was a Commission meeting date given to us to come back to the Commission with all of the schedules. I believe it was something on the order of late May or early June, something like that.

COMMISSIONER GILINSKY: Come back with the schedule.

MR. EISENHUT: Come back with all of the schedules on all the plants of what it looks like.

COMMISSIONER GILINSKY: So this item is going to get factored in to a big set of items and it may well be several years before it is dealt with.

MR. THOMPSON: That is the system that is presently in place. That is what we would add this one to, that overall

program to do it in an integrated fashion.

COMMISSIONER GILINSKY: Yet you are picking out Salem for different treatment in giving operators instructions on scrams?

MR. THOMPSON: That is correct.

COMMISSIONER GILINSKY: What is the logic there?

MR. THOMPSON: The logic is that there is information that is available to the operators which can clearly improve their performance in responding to a transient, an ATWS transient, whereas, the silence alarm covers all of the alarms that they have.

COMMISSIONER GILINSKY: It seems like a clear thing that you would like to do. You would like to separate these alarms from the other alarms.

MR. THOMPSON: I don't disagree that it would be a "nice-to-do" item.

COMMISSIONER GILINSKY: I think it is more than nice to do. I think it is very important to do.

CHAIRMAN PALLADINO: There is no disagreement on the importance. The question is how soon will it be done.

MR. THOMPSON: I would say that there is a disagreement on the importance and we feel that the location and the appropriate demarcation for the first-out panel does give the operators sufficient focus to the first-out panel that they can use that and rely on that for taking action in the

case that you have an ATWS.

COMMISSIONER GILINSKY: After you have acknowledged the alarm is what you are saying?

MR. THOMPSON: That is correct.

COMMISSIONER GILINSKY: Let me ask my other question which deals with the panel after you have acknowledged the alarm. Do you believe that the red and white panels can be sufficiently distinguished so that you can tell clearly which is the first alarm and which is not? We had some testimony earlier suggesting otherwise.

MR. THOMPSON: We think that could be better designed from a human factors. Our reliance on the use of the first-out panel does not require the individual to specifically identify which of those flashing lights came at the first out in order to take action.

COMMISSIONER GILINSKY: Do you think that is not important information for later review?

MR. THOMPSON: Yes, I agree with you, Commissioner. It is important information for later review. I think, in fact, the post-trip procedures which will be discussed later requires as a step that they verify their sequence of events recorder and the first-out panel agree. If there is some disagreement in there --

COMMISSIONER GILINSKY: Are they clearly distinguishable?

MR. THOMPSON: For those purposes, they are. That is, once you say, "Okay, now let me find which is the first out," if it hadn't been reset as you well know that will be lost at that time --

COMMISSIONER GILINSKY: Right.

MR. THOMPSON: -- but whether it is a quick one to two second glance, we are not convinced that all operators will be able to quickly distinguish it. We don't require that they do.

COMMISSIONER GILINSKY: It is not for that purpose though, is it?

MR. THOMPSON: That is correct.

COMMISSIONER AHEARNE: Does it take more than perhaps different lightbulbs to make it more distinguishable?

MR. THOMPSON: I don't know the answer to that. I do know and I will ask my expert, that there are four sets of lights. They have two red lights and two white lights and both lights come on. It is not just the red lights.

COMMISSIONER AHEARNE: I understand that. All I was asking you is if that is the way you have it described and I was asking if it takes more than having those two red lights perhaps different bulbs.

COMMISSIONER GILINSKY: Let me ask, do the operators feel they cannot distinguish the two?

MR. THOMPSON: I don't know the answer to that

question.

CHAIRMAN PALLADINO: Do you have an answer to Commissioner Ahearne's question?

MR. KENNEDY: This is Bill Kennedy in the Division of Human Factors. As far as the operator's ability to distinguish between the first out and the other subsequent other alarms, they can do that when they are looking for it. They didn't remember it on two occasions which gives evidence that they can't do it when they are not looking for it.

COMMISSIONER GILINSKY: What does looking for it mean? I have looked at that panel and it seems to me pretty clear which one is red.

MR. KENNEDY: If you are looking at the panel to determine that there is a red one or which one is red, yes, sir. You can tell. But if you are looking to see if there is a light on that panel, you will pick up that there is a light on that panel. You may not pick up that it was a red one versus a white one.

When we looked at the panel, I think the same day as you were there, we had two members of our group who had to some degree a color-blindness problem. In one case, the NRC staff person could not distinguish that the red was, in fact, on and in the other case couldn't distinguisn between the red annunciator and the other annunciators.

COMMISSIONER GILINSKY: What is the relevance of

that, that a color-blind person cannot distinguish?

MR. KENNEDY: There are degrees of color-blindness and some of us cannot tell them apart.

COMMISSIONER GILINSKY: Are some of the operators color blind?

MR. KENNEDY: There is a requirement for the operators to have taken a color-blindness test and passed it.

CHAIRMAN PALLADINO: Would that color-blindness test though permit them to differentiate? Will that test whether or not they can differentiate these two lights?

MR. KENNEDY: I can't address that. We don't specify what test will be used as I understand it.

COMMISSIONER AHEARNE: But could you answer my question. If -- assume there is a difficulty, would it take more than a changing of those light bulbs?

MR. THOMPSON: That is, just make redder light bulbs or green ones?

MR. KENNEDY: I am not sure that I should propose how to redesign it to get the differentiation necessary. The staff, as I understand it, does not propose how to fix it. We just say whether or not it is acceptable or not.

COMMISSIONER AHEARNE: Wait. We have an order here that says on the ATWS trip, it is more than just a proposal, it is a here's what you do. I agree in general principle. I wasn't asking you if that is what you would direct them to

do. I am asking you as a for example, if that is something that could be done.

MR. KENNEDY: Yes, sir. I think, for example, that is something that could be done.

COMMISSIONER GILINSKY: I must say that this distinction of looking at the panel and looking for a red light escapes me. Can you explain to me what you are saying.

MR. KENNEDY: I will try again, sir. We have on two occasions, the 22nd and the 25th, and we haven't investigated any others. The facts are that operators can tell us that yes, lights came on on that panel but they can't tell us which were the first oue.

COMMISSIONER GILINSKY: They may not have looked at the panel.

MR. KENNEDY: How would they know then that any light came on? They had to pick up that a light came on or more than one light came on, but they didn't notice or they didn't remember.

COMMISSIONER GILINSKY: The panel was on for something like ten minutes, between five and ten minutes, and people did not in resetting it take down the information from the panel. So far as I can tell, they didn't think it was important. I don't know. But that doesn't go to the question of whether you can distinguish that red light from the white light. It seems to me you can.

MR. KENNEDY: I agree that you can in an environment of a post-trip find out why the direct trip, what was the first out?

CHAIRMAN PALLADINO: Do you plan that the applicant take action to correct this situation or at least improve it?

MR. THOMPSON: As part of the detail control room design review, there are a number of deficiencies that we are looking at. One is the number of different annunciator tones. There are some 12 or 13 and we tend to believe that the number shouldn't exceed nine in order to have some real meaning to the operators.

Looking at the knee switch, the alarm re-set function as well as the reliability of the panel and the proper indication are just those that we clearly want to ensure are included in the detail control room design review.

CHAIRMAN PALLADINO: Can we go on? Do you want to start with area "C"?

MR. DENTON: When I said I had a 15-minute talk, I didn't know that we would spend most of our time on this issue.

COMMISSIONER AHEARNE: Are you saying that this now is going to be the long one?

(Laughter.)

MR. DENTON: Maybe we covered it all.

CHAIRMAN PALLADINO: I made a commitment to at least one Commissioner that we would adjourne at 12:15.

COMMISSIONER GILINSKY: Why don't you make that to two Commissioners?

(Laughter.)

CHAIRMAN PALLADINO: I will make it to all Commissioners, plus or minus one minute. Go ahead.

(SLIDE.)

MR. DENTON: Once again, I have listed the principle issues that we have discussed on previous occasions and perhaps I will just ask Mr. Starosecki to summarize the thing that might be of most interest and then answer questions on it.

MR. STAROSECKI: There are eight management issues that are listed in the viewgraph and the ninth one was the overall management capability and performance.

We have gone through and satisfied ourselves on each of the eight issues and we can talk details about how many work orders were reviewed. There were a large number reviewed. We can talk about vendor manuals.

In addition to that, in looking at the overall management capability and performance, we tried to do a balancing evaluation of what does this information tell us. So the selective issues that we have identified relate to two things, procedural adherence and safety perspective.

When we looked at the problems associated with the Master Equipment List, when we looked at the problems associated with procurement, work order classification -- those were indicative of failure to adhere to procedures. The procedures are there. The procurement program that Salem has is a good program. The procedures are very explicit.

People didn't follow them.

COMMISSIONER GILINSKY: What does that tell you?

MR. STAROSECKI: This is telling me that both of these things, procedural adherence and safety perspectives, point to what I originally said when I made the first presentation here and that is attention to detail and reflects a problem with supervisors and managers following up on how the work is being performed.

COMMISSIONER GILINSKY: It sounds to me like a failure of basic discipline.

MR. STAROSECKI: There may have been discipline problems.

COMMISSIONER GILINSKY: I don't mean discipline in the sense of having people shine their shoes, but maintaining the important procedures and detail and insisting that it be done. The problems cover many, many areas and involved many, many people. They are not isolated as was represented to us at one of the first meetings. I don't mean by you. I guess I

don't see, and I may be jumping ahead of your presentation here, the thorough-going solution, you might say, that makes a "get-well" program here believeable on my own part.

MR. DENTON: I think it was intended -- what we intended to do was to fix the seven or eight areas where we knew how to fix it, that is whereby changing procedures and putting in new steps in the procedure guideline and making things more formal than in the order by requiring that these management reviews be done or broader areas. That has been one of our traditional approaches when there is a management breakdown as we used in Pilgrim to require that they get the assistance of outside groups and that is what has happend here for BETA for short term and, I think, the Management Analysis Corporation for longer term looks. So these kinds of longer term looks at the management areas are in the order.

MR. STAROSECKI: Let me say that I don't disagree with anything you have said except the licensee has acknowledged the problem and he has recognized that you can't solve it overnight, also. They are going to approach, I think, the problem in two ways and I agree with the approach. One is you have the first-line supervisors. They have to spend more time with the work force, spend more time out in the plant where the work is being done. But by the same token, you have to look at the upper-line managers and see how involved are they, how knowledgeable are they. An outside firm that can do these

interviews and find out through the interview process how people are interacting or not interacting is going to give somebody the information they need to change things.

COMMISSIONER GILINSKY: I know. But these are highly placed highly paid people who are chosen because of the belief that they could really do the job and I think there is just missing here an element of accountability.

Harold was talking about a conversation with the Japanese. Well, they did tell us that there are very few breaker failures and other things that sounded very good. They also said when there is a major failure, the top people resign. We don't have that element of accountability in the utilities that we deal with. I think it is not unrelated to the performance.

CHAIRMAN PALLADINO: We should ask them what the equivalent of the NRC does?

(Laughter.)

COMMISSIONER GILINSKY: I think that is a lesson we can consider seriously as well.

But the fact of the matter is that that is a very important part of having this sytem work right. It is not only a matter of accountability, but it is a matter of getting new leadership to carry out a new program. I don't think you can make these changes work without new leadership at the top and I am talking about the corporate level.

COMMISSIONER ROBERTS: Victor, under that kind of reasoning, shouldn't have all the Commissioners resigned after the accident at Three Mile Island?

COMMISSIONER GILINSKY: We can discuss that, Tom. As a matter of fact, I went up before the Senate on that subject.

COMMISSIONER ROBERTS: I am not antagonistic to you. It is a similar question.

COMMISSIONER GILINSKY: It happens to be something I had to present myself for before the Senate and they decided to put me back here.

CHAIRMAN PALLADINO: There is another consideration though.

COMMISSIONER AHEARNE: Just to be clear on that, Tom's point was right after the accident, we didn't resign.

COMMISSIONER ROBERTS: I didn't propose that you should have. I just raised a similar question.

COMMISSIONER GILINSKY: It is a subject that we can discuss at another time. We happen to be talking about Salem, and whether or not you are right about that, the fact is we still have to deal with Salem as we have to deal with a number of other plants. That is what we are charged with here by law.

CHAIRMAN PALLADINO: There is another consideration though. You can have management that has identified and

shown failings and if they make a good effort, they can be successful in improving. Sometimes you are better off with a management that has seen the light out there and has gone to the precipice rather than some new team that doesn't even know the precipice exists. So I would be very careful about saying what should be done with regard to the top management in this case.

However, I would want to be assured that this is a problem that is being addressed and it is being addressed in the best way we know how. I think that is a valid point to deal with. I am not prepared to deal with whether it is better to bring in new inexperienced management or those that have faced the issue and taken corrective action.

COMMISSIONER GILINSKY: I have to say that generally speaking, I agree with you. It is a matter of degree. It depends on the kind of problem you are dealing with. I think here we are dealing with a very serious problem.

CHAIRMAN PALLADINO: I think a problem that is more fundamental and I think we brought it up last time and I think John was hitting at it again is that this utility when an item is pointed out to them, says, "Oh, yes. We will fix that." Then they go on. What I think is needed and I hope the Management Analysis Corporation can help them on this is that they develop a sense of initiative on their own to see that these things need to be done. You were making a point on

the training.

On the training, they thought they were doing right and the NRC came and said, "Oh, wait a minute. You are not doing it right." Then they said, "Oh, we will fix it." That is the point I think John Ahearne was making. They should have known to fix it without having to wait for the NRC staff. I think that is the fundamental point that has to get across to the top management, the intermediate management and the operating personnel in the organization.

I would hope that the Management Analysis Corporation and whatever else that might be suggested for them, that it can be effective on that point.

MR. STAROSECKI: It is for that reason, Mr. Chairman, that we have agreed and the licensee has proposed with this interim solution of an oversight group composed of people outside of the company to provide at a high corporate level identification of problems and, so to speak, provide the safety perspective from an outsider's viewpoint for the corporate management.

MAC is a longer term effort. That is going to require some kind of action plan. In the interim, this oversight group should help. Prior to start-up, having an organization like BETA coming in is also of assistance. It is clear that we need to get some outside involvement to help the people make the transition and I think the approach put

forward in our evaluation, we agree with and we recognize that it is not going to be an overnight accomplishment.

CHAIRMAN PALLADINO: In deference to what Commissioner Gilinsky said, I think if Management Analysis Corporation finds that there are untrainable people or that there are people who are just not conditioned to correcting their ways, that would be an appropriate time to make changes.

MR. STAROSECKI: I would agree with you, sir, but I would go on experience and say looking at the Boston Edison Company, MAC was very influential and the company did make management changes and did cause a restructuring and caused a lot of aggressive involvement on the part of the corporate to start solving the problems.

I have some basis for being optimistic.

COMMISSIONER ASSELSTINE: Joe, let me ask a question if I could here. Since these events transpired, I gather you have had an awful lot of interaction with the company. You have now developed this large package of items that the company has now agreed to do.

Would you characterize or I will let you characterize the attitude and approach that the utility has taken in putting together these sets of changes. Particularly, I would be interested in hearing whether you characterize the utility as being in there aggressively proposing both identifying the problem areas, aggressively proposing the corrective measures,

taking the initiative in terms of proposing the kinds of changes that need to be made or corrective action. Or was it one of you tell us what needs to be done or simply meeting the minimum that you all set forward or a difficulty in terms of their not readily agreeing to the kinds of things that you want.

How would you characterize the reaction and the performance of the utility since February 25 up to now? Management's study is fine, I think, for the future, but it seems to me we have had two fairly serious events and that there was a real opportunity over the past two months for that utility to demonstrate its present attitude and commitment.

I would be real interested in your assessments, both yours, Rich, and some of the other people who have dealt with them on how you would characterize it.

MR. STAROSECKI: I would have to preface it by saying there were a few things underway. MAC's study in the area of QA, they had already taken the initiative to do that.

I also look at the licensee and say this licensee has been in a mode where he has been finding information, collecting facts and trying to understand what has been going on as somewhat we have.

I think the licensee has been approaching the problem as I think I have historically seen them. It is not

overly aggressive. They have listened. They really haven't brought many new ideas to the table. They listened and they understand and they agree, but I have not seen the aggressiveness that I would expect from a licensee in this kind of situation.

That is a top-of-the-head judgment right now and I am sure that some of my staff in the region may disagree with me.

On balance, I would have to say, when you have a problem and you have been struggling with it, you are not going to change it over night and I would have been worried if they had come up with radical solutions because that would not have been indicative of that organization.

So on the one hand, I am not happy and I would like to see more aggressiveness, but I also recognize that that is the organization talking that that needs change in direction. I guess I don't have an easy solution. That is judgment.

MR. DENTON: There is one area that Mr. Eckert has mentioned to me that I think is worth noting that is his own initiative and he has decided to incorporate in the training of the company's executives something he calls "nuclear ethics." It is the focus on safety issues and adherence to the tech specs and the licensing process and emergency planning and all those things that we typically look for

initiatives on and has not been a part of their normal corporate training.

That is one area that they have done on their own initiative.

COMMISSIONER GILINSKY: One of the things that has been remarked upon here before that I found particular telling shortly after the event when we discussed it was that when you came there on the 25th and asked have you had any recent trips, they said, "Oh, yes, there was one a couple of days ago." We asked if we could get the information and they went back and as soon as they looked at it, they knew they had a failure to scram.

So they understood it. They are just as experienced and intelligent and know the plants actually much better than we do.

But somehow, they didn't think to look and they said that they understood their experience, they said, better than we did. I must say that I can't understand that. In other words, why did we think of it and they didn't think of it?

CHAIRMAN PALLADINO: I think that is a fundamental question.

MR. DENTON: It is this capacity for self-examination that was missing. I think we have talked about that earlier.

MR. DIRCKS: What you are getting into is a management attitude but I think the things that we have tried to deal with here, it is almost equivalent to someone who has an illness and goes to a physician and we can prescribe certain medicine. If you are talking about someone's attitude or philosophy or how one lives, it is getting beyond, I think, the tools that we have at hand right here. What I am trying to do is toss the ball back over to the policy makers here and get some view from you.

COMMISSIONER GILINSKY: I understand that.

MR. DIRCKS: We have gone as far as we could go on this one.

COMMISSIONER GILINSKY: I guess the point I am trying to make is that the people at the plant, usually people we deal with are experienced, competent and so on and they understand all these things. But they are under certain pressures just as we are under certain pressures and they are under pressures to keep these plants running.

These pressures come from corporate headquarters. Those are the people who set the style. Somehow, the style was wrong and we need a new style here. I think to get that style, you need changes at the corporate level.

COMMISSIONER AHEARNE: Could I ask a follow-up question, Bill, which somewhat relates to this?

CHAIRMAN PALLADINO: Go ahead.

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COMMISSIONER AHEARNE: I am having some difficulty trying to understand what the staff's judgment is on management. The reason I am having difficulty is that I see almost three separate judgments having been reached. I realize that you might say that they are preliminary. The first was in previous meetings when we went through the description of what happened at Salem, the implication was that the description of the management system was as Commissioner Gilinsky has just been talking about -- bad management, a lot of failure on the management side. The second picture is the one that at least is present in some of the words in this C.9 section in which you say, "Historically management has not displayed the expected aggressive effort to self-evaluate and redirect effort to correct internally identified problems." You say, "The effectiveness of these actions ..." and these are the follow-on actions that they have taken, for example, after INPO, "... the effectiveness of these actions has been less than expected." You go on to say, "The support groups tend to be too isolated from one another and their collective efforts are not well integrated."

"High level station management and first-line station supervision failed to adequately access the performance of their subordinate. Poor performance was mildly criticized and then rationalized," and so on. There are a number of these critical statements.

The third is that embedded in the middle of this you say, "During the fact-finding team review during the first week of March," in the analysis, "the information provided the NRC staff with several indicators suggesting a major breakdown in management and quality assurance program implementation. Subsequent detailed reviews and evaluations by the licensee and the NRC staff have confirmed that the programs in place are basically sound."

Your final judgment is that management's programs in place as modified are acceptable to support continued operation. After reading this, I wasn't clear whether you were trying to tell us that your initial judgment on the weakness of management was overly critical and you have now concluded that it wasn't as bad as you thought it was or are you saying that yes, it was as bad as you thought it was, but you are confident in the future that it will get better?

MR. DIRCKS: When you say bad management, I think you may be referring to a statement that a member of the staff made. I don't think we have come up with an overall evaluation along that line.

I think the description at C.9 is about right.

COMMISSIONER AHEARNE: It says "on the one hand" this and "on the other hand" that.

MR. DIRCKS: As you will find in almost any organization. I think it is an organization that has had some

problems. It has determined to through various outside forces and internal forces to make a cost correction and I think we are seeing some elements in transition as has been pointed out, the movement of the corporate level office to the site, organizational changes. I think we all like to see more organizations leap ahead of us or INPO and adopt things on their own.

I think this organization has picked up on INPO evaluations and has moved. They have picked up on our evaluation in their own internal movement.

It is difficult to say. I think almost any organization suffers from many of the things you described.

COMMISSIONER AHEARNE: Sure. Let me try the question again. Maybe I misinterpreted what you people were saying in earlier meetings. The sense I got was that on a scale of all of our plants that we monitor, license and inspect, that on the management side this was down at the bottom. That was the sense I got from your previous meetings.

CHAIRMAN PALLADINO: I got the same sense.

COMMISSIONER AHEARNE: Some of the statements in this C.9 give me the impression that the staff and in particular the section that I read where it said that events before gave us the impression that there had been a major breakdown in management, and then you go on to say that subsequent reviews and evaluations have confirmed that the programs are

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basically sound.

CHAIRMAN PALLADINO: However, they do go on to add about the management aspect, that they perceive a lack of resolve on the part of plant managers and supervisors.

COMMISSIONER AHEARNE: What was perceived? That is what I am trying to get out. I am trying to understand, are you saying that the previous picture was in error and on this sort of scale of where this sits on the various plants that instead of being down near the bottom, it is about average.

MR. DIRCKS: Is it something that we submitted to the Commission?

COMMISSIONER AHEARNE: The Chairman got the same impression I did.

CHAIRMAN PALLADINO: My interpretation is somewhat different. I don't think that the rating as one of the poorer managers has changed. I think they have gone back and said, "Well, is it so fundamental that what they have worked up is improper." It turns out that they are saying we think what they propose is basically sound but they don't do it. So the management is still there having flaws in its approach.

MR. DENTON: I can only speak for myself, I think, in this area and others may have differing views. If you look at the objective measures of management prior to the accident, that is the SALP reports and the INPO reports, they

were not at the bottom or near the bottom of those kinds of lists. I think if you read SALP and INPO, they weren't there.

I reacted to some of the discoveries of the lack of management attention to the safety breakers as being pretty poor. I think I characterized it as dismal at one time. But that was on the discoveries that were made in investigating the accident and not on the basis of our traditional SALP or INPO review. I think it is in a state of flux. They were doing some things right before the accident. They recommitted to speed those up and improve.

I think Mr. Starosecki had his own view from being out there with them.

MR. STAROSECKI: My initial views as I was trying to characterize them, was I saw this problem of attention to detail. As I recall, I kept hitting that point and I wanted to see how pervasive the problem was and whether it resulted in bad programs and that to me, if it had resulted in bad programs, would have been a significant management breakdown.

There are degrees of interpretation of what is called management breakdown and this particular evaluation in C.9 is trying to spell as clearly as we can without using a catch phrase what it is we mean. We don't want to use the word management breakdown. I didn't envision Salem at the start of this evaluation to be near the bottom but there were indicators.

COMMISSIONER AHEARNE: You see, there are two questions we are going to have to address and this is somewhat related to Commissioner Gilinsky's questions on what has to be done for restart but they are both in the areas of later enforcement action. They relate to what is your judgment on the management and perhaps this isn't the right meeting to discuss it.

CHAIRMAN PALLADINO: Could I try a related question? Have the approaches that are outlined herein, such as getting a management corporation, has experience shown that this is an effective approach? Are these approaches that are being identified likely to be successful? Has experience confirmed that or not? You cited Boston Edison for one. I was wondering what your experience is.

MR. DIRCKS: We have cited Boston Edison. We have used outside management reviews on other utilities. I think in general the corporate world has used management consultants to come in to improve performance. I think we are just turning to a general corporate way of doing business and I think they have been successful.

CHAIRMAN PALLADINO: I hate to interpret what the staff is going to tell us and maybe they can interpret for themselves, but I have the same problem in trying to come down where we are with regard to management. I think in that same paragraph that John Ahearne was referring to, it comes out again, their capability of implementing the programs

that they develop. They appear willing to do it. Do we have outlined here an approach that can change that? I gather you think so or you wouldn't be reaching the conclusion you are, but I sure would like to hear it.

MR. DENTON: I guess the only real measure will be performance. We think that the steps that they have taken and the things that are in the order all should achieve the level of performance of management that we are looking for.

CHAIRMAN PALLADINO: I can't ask you to guarantee that. I am just trying to find out your feeling.

MR. DENTON: I did feel that with the changes that they made and the changes that were to be made in the future that they had gotten themselves on a track that provided a reasonable level of assurance in this area.

MR. STAROSECKI: I think it is important to recognize that we are doing two things. We are going after the management aspect from looking at an attitude standpoint and how you are working with the people, but also these studies also address the safety perspective, too, with the independent oversight group.

So we are going after both. I am optimistic about the approach. I do wish to point out that this is not a pervasive problem throughout the entire station. We, in fact, have an awful lot of experience with the licensed operators at this plant. During a six-week strike that they had last

year our experience there shows they handled the plant very well. There were no trips, no severe transients. They were doing the maintenance themselves. So it is to their credit they have a good staff. They can run a safe plant. We do have a problem and it is really beyond us as to pinpointing it and that is not our job. That is where an outside consultant can help this utility more than we can.

COMMISSIONER GILINSKY: Now that you mention trips, they do have an unusually large number of trips on the average. What do you attribute that to?

MR. STAROSECKI: I really haven't sat down to look at it. I do know that we are talking about an average of a dozen trips over the last year for each plant due to feedwater problems.

COMMISSIONER AHEANRE: Alone.

MR. STAROSECKI: Alone.

COMMISSIONER GILINSKY: But that means that here is something that they are having problems with time after time and it hasn't gotten cured.

CHAIRMAN PALLADINO: I think his point again relates to that intellectual curiosity. Are they asking that question of themselves?

MR. STAROSECKI: On that specific topic, what has been done in the area of reactor trips associated with feedwater pump problems, I asked my staff that very question

last week. The answer is, we are starting to develop a history where we should see the results because they have made some recent modification in this very outage. So we wanted to see as a result of this start-up what was happening.

Now obviously they were encountering problems on Unit 1 because of this modification.

COMMISSIONER GILINSKY: You are talking about a dozen trips. How many trips were there all together?

MR. STAROSECKI: Per unit, we are talking a dozen trips related to feedwater last year.

COMMISSIONER GILINSKY: How about all together?

MR. STAROSECKI: I don't know the number.

MR. DENTON: At least another dozen.

MR. STAROSECKI: I don't have that number.

COMMISSIONER GILINSKY: So you are talking about three times the industry average.

MR. DENTON: I was just guessing. I don't really know the number of trips. I think it has been excessively high.

MR. DIRCKS: You have representatives from Public Service here.

CHAIRMAN PALLADINO: Is there a representative from Public Service that has that information?

MR. ECKERT: Richard J. Eckert, senior vice-president of Public Service. I don't know the exact number of trips

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that we have had. Early in the history of the units we were having a lot of feedwater flow problems and we did have an excessive number of trips. That condition was recognized. Changes were made in the plant. We felt as the units come back in service after this present refuelings, that we have that problem under control. We won't obviously know that until it actually happens.

In the calendar year of last year, however, both units were available over 95 percent of the time and you can't have a lot of trips and be available over 95 percent of the time. Most of the trips were during start-up when you have very low flows in the system and you have control problems. But once you get up to load, you don't have a lot of trip problems.

COMMISSIONER GILINSKY: I understand that in the last six months, you have had something close to 20 trips on the two units, does that sound right?

MR. ECKERT: I don't know. I don't have those numbers. But, as I say, if you can operate over 95 percent of the time, you can't a lot of trips particularly not for load trips.

COMMISSIONER GILINSKY: But close to 20 trips is a lot of trips in six months.

MR. ECKERT: I don't have those statistics with me. I can't answer.

CHAIRMAN PALLADINO: All right. Thank you.

COMMISSIONER GILINSKY: Thank you.

CHAIRMAN PALLADINO: Are there actions other than the short term actions that you identified that the staff feels need to be taken before restart?

MR. DENTON: The next page --

COMMISSIONER GILINSKY: I have some questions on this page. I gather you are leaving some aspect of the QA program for later. Can you explain the rationale for going with what it is that you would plan to go with at the present time?

Why wouldn't you want to have all of that in place right now?

MR. STAROSECKI: You are referring to what aspect of the QA program?

COMMISSIONER GILINSKY: I gather some parts of it are being left until September to work out.

MR. DENTON: I think it is intended that among the activities of the MAC Corporation, that they take a broad look at QA.

COMMISSIONER GILINSKY: Let me just ask you this. Is the QA program as it stands across the board satisfactory for plant operations or are there things that have to be improved beyond start-up that you feel just have to be changed or are you satisfied with the implementation of the QA

program as it is now?

MR. STAROSECKI: There are some improvements we want to make. We have QA reviewing an awful lot of information.

MR. EISENHUT: There are a couple of actions that have been accomplished on QA in the short term. There is one item that was hanging over which we felt could be handled in the longer term and that is some additional detailed training of processing work orders to add more emphasis to the QA test, retest, requirements.

COMMISSIONER GILINSKY: Is that the item that is scheduled for September?

MR. EISENHUT: That is the item. That is the only item, I believe.

COMMISSIONER AHEARNE: In your order, you have a list.

MR. EISENHUT: In fact, I should say at this time what we have done in the order is we have attempted to even follow the section-by-section flowing directly out of the evaluation and put all the items that either had to be confirmed or ordered in the future and put them in the order so it does provide as the Commissioner has suggested an easy cross-reference to what the items are.

It was our intent to pick up all items out of the evaluation and put them in the order. I believe we have done that. The proposed order has them if it has been stated in

writing from the utility that it is complete, then it is confirmed in the order.

CHAIRMAN PALLADINO: Are these all the items or are there other items that you feel you have to back and check that are not in this order?

MR. EISENHUT: No. This is meant to be complete.

CHAIRMAN PALLADINO: Somehow I got the impression that there was something missing.

MR. DIRCKS: The MAC diagnostic report is due in May of 1983 and I think that is an evaluation how well the QA program has been operating, is that right?

MR. EISENHUT: Yes, that is correct. The MAC study is, in fact, the last item on the last page of the detailed listing that the final report from the MAC company is, in fact, due to be submitted on May 30.

Then there is a previous section in the report, also, which is really the follow-on activities that within 60 days after the utility receives the MAC results, they owe us an evaluation of the action to be taken in response to each. That is what I will call the longer term look.

The shorter term was the BETA study and we are requiring that to be submitted to the staff.

CHAIRMAN PALLADINO: Let me ask you the following question. Suppose the Commission were to say that we concur with your report and we say when you are ready, go ahead and

restart. Would there be things other than what is listed in here that you would feel you have to do?

MR. DENTON: No. I think there are a couple of things that we have not yet completed that we said that we are going to do, but I don't know of new things that we need to do.

COMMISSIONER AHEARNE: Have I misread this order? I read the order as independent of your approving restart in the sense that this list in a large list of items some of which are complete and the other are items which have specific dates but it doesn't seem to be a relationship between things that have to be done before you would agree with restart.

Is that a misreading of this?

MR. DENTON: I guess I don't quite understand.

MR. EISENHUT: In theory, you are right because there are no actions required in the order unless a date happened to have come up on April 15 --

COMMISSIONER AHEARNE: Coincidentally.

MR. EISENHUT: That's right. Coincidentally. The order way of formalizing the commitments that the utility made and many of those we have inspected and verified to the extent that we need to. Others we will be looking at as time goes on, marches on. So this would, in fact, formalize all of the commitments that have been made. It

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would formalize schedules and documents the utility's proposed schedules which we have now negotiated and agreed upon and it formalizes the MAC, BETA and nuclear oversight three-tiered approach for the management.

This order in theory would not be needed to restart the plant. It could be just a sign-off saying that we have them under a letter hold at this point.

COMMISSIONER AHEARNE: Is it basically a contract between the NRC and the licensee? These are things that the licensee says they have done. All right. Therefore, we are going to put into this order you have done it and the things that you have said that you are going to do, we will put this in the order that you are going to do it.

MR. EISENHUT: A combination of those and some additional items that we put in that he didn't necessarily propose in the first place. It is a combination of all of those and we have attempted to bring all the pieces together into this kind of a package.

COMMISSIONER AHEARNE: So it is primarily a confirmatory order.

MR. EISENHUT: Mostly confirmatory, a few ordering items and then really one item of Show Cause. That is the item of putting in the ATWS fix or demonstrate why you shouldn't.

MR. DENTON: The order in my mind is definitely tied

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to restart because it incorporates a resolution of loose ends or big projects in there.

CHAIRMAN PALLADINO: Is it clear from here what is required prior to start-up?

COMMISSIONER AHEARNE: No.

COMMISSIONER ASSELSTINE: No.

COMMISSIONER AHEARNE: Not in the order.

CHAIRMAN PALLADINO: This is why I was asking the question. Incidentally, since I made a commitment to quit at 12:15, let me take control of the last five minutes insofar as I can.

(Laughter.)

CHAIRMAN PALLADINO: I am going to read your conclusions just in the interest of time.

COMMISSIONER GILINSKY: Your conclusion of what?

CHAIRMAN PALLADINO: Let me take control of the last five minutes and if you want to stay, you can.

COMMISSIONER GILINSKY: It depends what you want to do with it.

(Laughter.)

CHAIRMAN PALLADINO: I want to come to the question of whether or not the Commission is prepared to take any action today. If it were prepared to take action, what action would it be. If we were prepared to take action, what I would propose to do is suggest that if we want to vote that

we accept the staff's conclusions modified in such way as may have come out of this meeting. If we say yes, then I would presume that would be an authorization to the staff to permit restart when it thinks the plant is ready. If the answer is no, then we have to decide what we want to do.

My question is, are Commissioners ready to vote? There are several issues that did come out this morning. Certainly the one that Commissioner Ahearne raised is a very important one from two standpoints. One, the fact that one can't be sure that the training is going to be adequate without confirmation that the April 7 commitment is met. The other one is again related to the basic management issue, is the utility really exercising an aggressive look into what it needs to do.

I think both of those are important. It would be easy to say that one of the conditions we place on any vote is that the NRC check the training. That would be easy. The other thing that is harder is whether or not this aggressiveness in looking at things does come about in the utility.

I gathered from the staff's analysis of management competence that they think that the steps being proposed have a likelihood of changing the organization. I guess that is a matter of judgment and we have to decide whether we concur.

Let me ask whether Commissioners think they are ready to vote. I hate to rush a vote and maybe that is a

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problem in itself.

COMMISSIONER ASSELSTINE: For myself, I have two other areas of questions that relate to the management issue that I was interested in to a certain extent. I want answers to those before I vote. But go ahead, and see what the others think.

CHAIRMAN PALLADINO: All right. Vic.

COMMISSIONER GILINSKY: I think you know where I stand but quite a part from that, I do, also, have some additional questions I would like to ask.

COMMISSIONER AHEARNE: I have two items that I would need completed before I would vote. First, I would like the staff to come back and I don't need them to have said we have now checked all this, but I would like to see their program that the staff is going to put in place to check the problems with the testing and training. The second is I believe we ought to have our enforcement meeting prior to voting on the restart. I believe there is too much of an overlap between the position that we would take in the one and the position we would take in the other. I find it really awkward to vote one without having at least addressed the other.

COMMISSIONER ASSELSTINE: I agree with that.

COMMISSIONER GILINSKY: I would like to say that I very much agree with that.

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CHAIRMAN PALLADINO: I wasn't tying the two together. I thought they could be independent.

COMMISSIONER ROBERTS: To me, they are two different issues and they are separable.

CHAIRMAN PALLADINO: That is the way I felt.

COMMISSIONER ROBERTS: Can the plant be restarted without endangering public health and safety. That is one issue. What happened in the past and whether enforcement action is appropriate, that is an entirely different issue.

COMMISSIONER AHEARNE: It depends on the type of enforcement action.

COMMISSIONER ASSELSTINE: That's right.

COMMISSIONER AHEARNE: I think it really is going to end up being wrapped up with where the staff comes out finally and, therefore, where we come out on the management issue.

COMMISSIONER ASSELSTINE: I agree with John. I think the two are in this case very interrelated.

CHAIRMAN PALLADINO: If we accept the premise that the enforcement action has to be addressed, I don't know if it has to be resolved but you are saying that it needs to be addressed.

COMMISSIONER AHEARNE: I am saying that it needs to be addressed.

CHAIRMAN PALLADINO: There are three of you saying

that.

COMMISSIONER AHEARNE: We have it in front of us.

CHAIRMAN PALLADINO: But we are out of time and I am not sure that I would be prepared to discuss it.

COMMISSIONER AHEARNE: No. I agree with you.

CHAIRMAN PALLADINO: I am taking your observations, the three of you as saying that they are tied together to mean that we can't make a decision today and that we should schedule as soon as we can and it may be that it will be possible to do it early next week, a meeting on the enforcement action and schedule a follow-up meeting on the question of restart as soon as that can be put in the schedule.

Maybe that is about where we have to leave the situation at the present time. I, for one, think I would have been ready to vote just to keep the record straight.

COMMISSIONER ROBERTS: So was I.

CHAIRMAN PALLADINO: And I gather Commissioner Roberts would have been, also, but we at the moment are in the minority. Let me leave it that we will schedule a meeting on the enforcement action and we will schedule a follow-up meeting on the restart action.

If there is nothing further to come before us, thank you all, we stand adjourned.

(Whereupon, at 12:17 o'clock p.m., the Commission adjourned, to reconvene at the Call of the Chair.)

NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

NUCLEAR REGULATORY COMMISSION

in the matter of: Discussion and Possible Vote on Restart of Salem Units 1 and 2

Date of Proceeding: Thursday, April 14, 1983

Docket Number:

Place of Proceeding: 1717 "H" Street, N.W.
Washington, D. C.

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

Marilynn M. Nations
Official Reporter (Typed)

Marilynn M. Nations
Official Reporter (Signature)

INTRODUCTION

- NRC FACT-FINDING TASK FORCE REPORT NUREG-0977 DATED MARCH 1983

- COMMISSION BRIEFINGS ON SALEM EVENT MARCH 2 AND MARCH 15, 1983

- STAFF STATUS REPORTS - MARCH 14, AND MARCH 29, 1983

- STAFF SER AND PROPOSED ORDER DATED APRIL 11, 1983 (SECY 83-98E)

- ANSWERS TO COMMISSIONER GILINSKY QUESTIONS - APRIL 12,13, 1983

A. HARDWARE ISSUES

- ISSUES DISCUSSED
  - SAFETY CLASSIFICATION OF BREAKERS
  - IDENTIFICATION OF CAUSE OF BREAKER FAILURE
  - VERIFICATION TESTING
  - MAINTENANCE AND SURVEILLANCE PROCEDURES

- SELECTED ISSUE
  - CAUSE OF FAILURE

- ISSUES RESOLVED TO SATISFACTION OF STAFF

- COVERED BY ORDER ITEMS A. 1-4

CONTACT:
VNOONAN -NRR

B. HUMAN FACTORS ISSUES

- ISSUES DISCUSSED
  - Operating Procedures
  - Operator Training
  - Operator Response

- SELECTED ISSUE
  - Revised Procedure

- ISSUES RESOLVED TO SATISFACTION OF STAFF

- COVERED BY ORDER ITEMS B. 1-3

Contact:
H. Thompson, NRR

C. MANAGEMENT ISSUES

- ISSUES DISCUSSED
  - MASTER EQUIPMENT LIST
  - PROCUREMENT IMPLEMENTATION PRACTICES
  - WORK ORDER CLASSIFICATION PROCEDURES
  - POST-TRIP REVIEW
  - TIMELINESS OF EVENT NOTIFICATION
  - UPDATING VENDOR SUPPLIED INFORMATION
  - INVOLVEMENT OF QA PERSONNEL WITH OTHER STATION DEPARTMENTS
  - POST-MAINTENANCE OPERABILITY TESTING
  - OVERALL MANAGEMENT CAPABILITY AND PERFORMANCE

- SELECTED ISSUES
  - PROCEDURAL ADHERENCE
  - SAFETY PERSPECTIVE

- ISSUES RESOLVED TO SATISFACTION OF STAFF

- COVERED BY ORDER ITEMS C.1-9

CONTACT:
R. STAROSTECKI, REG. I

SHORT TERM ITEM YET TO BE COMPLETED

- REVIEW OF RESULTS OF BETA COMPANY EXAMINATION OF STEPS TAKEN TO DATE BY LICENSEE IN PREPARATION FOR RESTART OF SALEM UNIT 1

CONCLUSIONS

- WITH THE HARDWARE, HUMAN FACTORS, AND MANAGEMENT ACTIONS TAKEN TO DATE AND THE FURTHER LONG TERM ACTIONS CONTAINED IN THE PROPOSED ORDER, THE ISSUES RAISED HAVE BEEN RESOLVED TO SATISFACTION OF STAFF.

12/82

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FROM: SECY OPS BRANCH

cc: OPS File
C&R (Natalie)

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Meeting Title: Dir x Pass. Vote on Restart of Salem Unit 1 & 2

Meeting Date: 4/14/83 Open X Closed ____

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2. Secy-83-98E	2	*	___	1	___
3. Letter Wegner, BETA to Eckert, PSE&G dated 4/14/83	1	*	1	___	___
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