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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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DISCUSSION/POSSIBLE VOTE ON FULL
POWER LICENSE FOR CATAWBA-1

- - -

PUBLIC MEETING

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

Thursday, January 17, 1985

The Commission met, pursuant to notice, at 11:05 a.m.

COMMISSIONERS PRESENT:

NUNZIO PALLADINO, Chairman of the Commission
THOMAS ROBERTS, Commissioner
JAMES ASSELSTINE, Commissioner
FREDERICK BERNTHAL, Commissioner
LANDO ZECH, Commissioner

STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

S. CHILK
G. JOHNSON
F. MIRAGLIA
E. CASE
J. O'REILLY
R. GUILD
N. RUTHERFORD
S. GRIFFITH
W. OWEN
H. TUCKER
S. TRUBATCH
M. MALSCH

AUDIENCE SPEAKERS:

R. BERNARO
D. VOLLMER

AUDIENCE SPEAKERS: (Continued)

P. SKINNER
J. OLSHINSKI
P. BEMIS
B. URYC
C. BERLINGER

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P R O C E E D I N G S

CHAIRMAN PALLADINO: Good morning, ladies and gentlemen. Let me begin first by apologizing for the delay in the meeting, it was unavoidable. But I think we are now ready to start.

The purpose of today's meeting is to discuss and decide on whether or not a full power license shall be granted for the Catawba Nuclear Power Plant Unit 1. On July 18, 1984, the NRC issued a license for the Catawba Nuclear Plant Unit 1 authorizing fuel load and precriticality testing.

Subsequently, the NRC by letter dated November 6, 1984 issued a new license for low power operation for power levels up to five percent of full power.

Staff has prepared a presentation and I understand that members of the NRC staff and representatives of Duke Power Company are available to answer any questions we might have. At the completion of the staff presentation and discussion, five minutes will be allowed to the Palmetto Alliance representative and five minutes for Duke Power Company representatives.

At the conclusion of the discussions, I will poll the other Commissioners on whether or not we should authorize the staff to issue a Catawba full power license. We had planned prior to vote a ten-minute recess, but in view of the delay I

will leave that up to the Commission at that time.

Do any Commissioners have other opening remarks.

COMMISSIONER ROBERTS: Do you have any idea how long this is going to last?

CHAIRMAN PALLADINO: Possibly two hours.

COMMISSIONER ROBERTS: Two hours?

CHAIRMAN PALLADINO: Possibly. We will see how brief it can be.

COMMISSIONER ROBERTS: I may leave.

CHAIRMAN PALLADINO: Well, I would hope you wouldn't.

COMMISSIONER ROBERTS: I have a long-standing previous commitment.

CHAIRMAN PALLADINO: Well, let's see how we go. Any other opening comments?

COMMISSIONER ASSELSTINE: No.

CHAIRMAN PALLADINO: Okay, then let me turn the meeting over to Mr. Case.

MR. CASE: Mr. Chairman, I'm sorry I missed your introduction but I am sure you indicated the staff is here today to make a recommendation and support that recommendation that the Commission authorize issuance of a full power license for Catawba Unit 1.

We have prepared a short briefing to that end. The principal speakers will be Frank Miraglia, the Deputy Director of the Division of Licensing, NRR, and Jim O'Reilly, the

Administrator of Region II and, I think, Frank will lead off the presentation.

MR. MIRAGLIA: Thank you, Mr. Case.

May I have the first slide, please?

We are here to discuss with you today a brief background relative to the plant and the licensee; an overview of the safety review, the inspection program including shift staffing, and the overall conclusion of the staff.

May I have the next slide?

Duke Power Company is one of a number of multiple owners of the facility. It is the operator and the agent for the other owners.

The Catawba Unit 1 design is a Westinghouse PWR, it is very similar in its principal design characteristics with the units of Maguire 1 and 2 which have been previously licensed. Yes, sir?

COMMISSIONER ROBERTS: May I interrupt. Can you give me what is the make-up of the North Carolina Electric Membership Corporation?

MR. MIRAGLIA: I can't answer that. It is something that we could provide to the Commission later. I don't believe we have anyone here.

COMMISSIONER ASSELSTINE: I am sure the licensee could do it later.

MR. CASE: I'm sure the licensee can provide it.

COMMISSIONER ROBERTS: I beg your pardon?

MR. CASE: I'm sure the licensee can add to the question.

CHAIRMAN PALLADINO: Do you want him to sit down?

COMMISSIONER ROBERTS: No, later.

CHAIRMAN PALLADINO: Why don't we ask the licensee to answer that when he comes up?

MR. MIRAGLIA: Yes. As I said, it is a very similar design to Maguire's Units 1 and 2 which have been previously licensed. It is an ice condenser containment and it has a safe shutdown facility which is similar to that in Maguire Units 1 and 2 which the staff has previously reviewed and analyzed.

COMMISSIONER ASSELSTINE: Frank, maybe you could just say a few words about the safe shutdown facility because when I visited the plant I found that to be a fairly interesting and unique feature of the plant. It looked to me like at least it was the beginnings of a step toward some additional decay heat removal capability in these types of plants.

COMMISSIONER ZECH: Yes, I agree. I had the same reaction aNd I think just a few minutes on that would be appropriate.

MR. MIRAGLIA: Okay. We have several staff members here that could amplify. It is a system that makes the facility independent of AC and DC power sources. Its primary

function is to achieve and maintain hot standby conditions. There is a unit, similar unit, at Maguire, Unit 1 and 2. It does provide some protection for fire and sabotage events nonconcurrent with design basis accidents.

It is not safety related in all respects, and it is not designed to the seismic criteria, and it is not necessarily designed to the single failure criterion.

We can have Mr. Bernaro and perhaps Mr. Vermiel of the staff amplify on those comments if the Commission would like to hear more about the safe shutdown facility.

COMMISSIONER ASSELSTINE: Maybe that would be helpful, and also if you could say a few words about how this feature has affected your reviews of other systems, for example, fire protection reviews. To what extent has that been part of your analysis and what has it enabled in times of those analyses?

MR. MIRAGLIA: I think Mr. Vermiel or Mr. Bernaro can address those issues, sir.

COMMISSIONER ASSELSTINE: Good.

MR. BERNARO: Bob Bernaro from the Division of Systems Integration in NRR.

The safe shutdown facility provides a fall-back position for transient events. That could be shutdowns caused by a fire or other events where you may not be able to handle the shutdown from the plant itself, you know, the conventional

equipment in the plant, either in the control room or in the shutdown stations outside the control room.

So, the safe shutdown facility provides that increment of protection by having independent AC and DC power and control switched over to it can handle the charging pumps to control primary system make-up, primary system inventory, and remove decay heat from the plant through the code safeties, the steam relief valves of the steam generators.

It can control the auxiliary feedwater system to make up to the secondary side and thereby stay in hot shutdown status for a relatively lengthy period of time.

It is an added protection. It doesn't add more than the ability to respond to transient events for a substantial period of hours. And then any further action to get to cold shutdown would require some sort of recovery action in the plant.

COMMISSIONER ASSELSTINE: Is this concept or perhaps even an expanded version of this concept something that the staff also is looking at under the unresolved safety issue on decay heat removal?

MR. BERNARO: Yes, it is. The staff has been looking for some time at a spectrum of systems ranging from this sort of system up to a full-blown dedicated system that could be Seismic Category I and respond to LOCAs as well as transients, and so forth.

COMMISSIONER ASSELSTINE: Okay, thank you.

COMMISSIONER BERNTHAL: As a matter of curiosity -- it's been, I guess, eight months or so since I was down there and I don't recall exactly what led to this particular installation as a separate system.

I am curious as to what the institutional process was here. Was this a product of Duke Power's engineering staff? Is this an idea that was borrowed from Germany, or how exactly was that decision arrived at?

MR. CASE: I think it came about because of the fire protection where a system such as this is talked about as an alternative way of protecting against fires.

COMMISSIONER BERNTHAL: Maybe the licensee could better answer that.

MR. BERNARO: Yes, the licensee is better equipped to answer that because they have gone into Oconee and, you know, there are other stations with a similar idea.

COMMISSIONER ASSELSTINE: It grew out of the other stations, the Oconee problems first.

CHAIRMAN PALLADINO: Okay, thank you, Bob.

MR. MIRAGLIA: The Catawba Unit 1 had a full participant joint exercise of its emergency plans in February of 1984, and we have the appropriate letters and determination from FEMA, the last and final determination being in July of 1984.

May I have the next slide, please?

I would like to point out two features in the safety review that received special attention, and one is the hydrogen mitigation system. It is a distributed hydrogen ignition system just like we have seen before in the Maguire units and also at the Sequoyah units.

It is a system that is manually activated from the control room. Certain confirmatory analyses and tests of the system are required and there is an appropriate condition in the Catawba Unit 1 license that requires submittal of this confirmatory information by April 1 of 1985.

With respect to technical specifications, the technical specifications were issued with the low power license and the previous fuel load license. It received internal reviews from the staff, receiving certification that the tech specs and the FSAR analyses were consistent. The Region performed special inspections, and you will hear more about those later, at the facility to determine the as-built compliance.

In addition, the utility has provided appropriate certifications.

One matter that I skipped here was the facility's on-site power supplies are TDI diesels. They are the V-16 diesels similar to those at Grand Gulf. Catawba had extended tests of both of the divisions of their diesels exceeding

750 hours. Subsequent inspections of those machines. Subsequent to the extended run replacement of component parts that seemed to show wear in that period of time. They have complied with the staff FSER for determination of what is necessary to assure compliance with GDC-17 for the first cycle of operation, committed to an enhanced maintenance and surveillance program, and have committed to implementation of all the recommendations from the TDI Owners Group. That is also reflected in the Catawba Unit 1 license as a license condition.

The hearings have been completed and decisions have been made by the ASLB for low power and fuel testing and also for full power license issuance.

At this point, if there are no further questions, I would like to turn discussion over to Mr. O'Reilly where he will describe the regional activities with respect to Catawba Unit 1.

COMMISSIONER BERNTHAL: I am curious on one point which you may have rushed through while I was reading here. But exactly how many parts were finally replaced, then, on those TDI diesels? I know they were all over the floor, it was a fascinating experience to see a disassembled diesel of that size.

But how many pieces finally, after detailed inspection --

MR. MIRAGLIA: I think they may have replaced some

cylinder heads and things of that number. Perhaps Mr. Berlinger from the TDI Project Group can give us a more definitive answer as to the exact numbers and the components replaced.

COMMISSIONER BERNTHAL: Okay.

MR. BERLINGER: I am Carl Berlinger, NRR.

I can't give you an exact number of parts, but I think the parts that were changed out included piston skirts where they changed with the AE piston skirts; push rods; they changed a couple of rocker arm covers and changed some valves. Valve stems had showed flaking of the chrome. Other than that, the engines performed very well.

All the parts that were replaced were not necessarily failed as a result of the engine testing, as a matter of fact, they weren't failed. But there were some problems with the piston skirts, they were of a particular design which after these tests were decided to be changed out for the AE style of piston skirt which had been proven to be more reliable.

COMMISSIONER BERNTHAL: So, the general nature of the flaws, then, was in your judgment not failure threatening or were a number of them failure threatening; or was this a matter of seeing some things that nobody wanted to take changes on and replaced. So, how would you characterize it?

MR. BERLINGER: I would characterize them as not

being threatening in any way. From the standpoint of push rods, some of them had cracks in them. But even those similar -- push rods similar to the ones that were in Catawba, they had shown cracking but never any failure. It's very difficult for them to factually lead to an engine failure.

COMMISSIONER BERNTHAL: Okay.

CHAIRMAN PALLADINO: How many hours of testing were involved roughly?

MR. BERLINGER: One of the engines was tested for 750 hours, the other one was tested for, I think, a little over 800 hours.

MR. O'REILLY: In excess of 800, that's correct.

MR. BERLINGER: Yes.

CHAIRMAN PALLADINO: Okay, thank you. Jim?

MR. O'REILLY: I'm pleased to be here today to summarize Region II's significant activities and findings that have led us to conclude that the Duke Power Company is both competent and qualified to safely operate Catawba Unit 1, and that Catawba Unit 1 has been built in accordance with their commitments to the NRC.

I have brought key Region II managers with me today with their experience and to directly address substantive matters related to their direct responsibilities.

Before we get into some of these specifics, I feel it's important that I provide a brief overview in order to put

the summary in, the necessary summary type of information my staff has provided in better perspective.

Region II has considerable knowledge on a nuclear and managerial competence of the Duke Power Company for in addition to Catawba, we have been deeply involved for many years in all the activities relating to construction and operation at five currently licensed nuclear power plants operated by Duke.

These plants are at two different sites, the Oconee site on Lake Wylie in South Carolina and the Maguire site on Lake Norman, North Carolina.

The knowledge gained from these experiences with five operation units has been invaluable to us in directing and focusing and sharpening our inspection focus at Catawba.

Now, at Catawba plant, as Frank said, almost identical to the two operating units of the Magure site, we have applied 25,000 direct inspection hours and many additional hours of non-direct inspection at the site. This major effort was performed by 80 different inspectors at initiation of construction at the Catawba site and all appropriate engineering and operational disciplines. For example, with no double counting, we have had 13 different inspectors looking at metallurgical issues; nine looking at operational matters; ten different inspectors looking at quality assurance; seven different inspectors on electrical activities; five different

inspectors on health-physics matters, plus nine different resident inspectors, some of which report in from other sites, for special purposes and special types of inspections.

This number does not include the supervisors or managers who have been directly involved in overseeing this program and their activities on the site.

In addition to the above, like in previous license cases, we did implement our normal policy upon the request in issue, problems or any concerns from any of the Region II inspectors discussed above relative to Catawba. We created a formal panel composed of senior management of each division as well as representatives from each of the technical areas. The panel reviews all outstanding issues prior to licensing of the facility to ensure their recommendation to licensing is representative of the Region as a whole.

The review included the status of the inspection program; inspector outstanding items list; the licensee's letter of completion; investigations and allegations; staff query responses; technical specification reviews and a systematic assessment of the licensee performance program.

I would like to say a few words about the staff query response. We do issue and did issue a formal notice to all regional personnel requesting concerns that may have not been, please to identify it or document it. We formally resolved and identified deficiencies by inspectors involved at

Catawba, and we do specifically respond to each concern.

The panel made a finding to me that Catawba 1 was ready to receive an operating license. We have no outstanding issues relative to Catawba.

Now, in that perspective, I have several of my key staff members and others here to respond to questions, and the first speaker today will be John Olshinski who is our new Division Director of our Reactor Project Division. He will be followed by Paul Bemis who is the new Director of Reactor Safety, and then our other division directors are here but I haven't scheduled them to talk. A few words will be said by Bruno Uryc who is the Allegation Tracking Coordinator for Region II. John?

CHAIRMAN PALLADINO: Are you going to discuss the SALP report?

MR. O'REILLY: Yes, sir.

MR. OLSHINKSI: I'll briefly discuss the inspection program at Catawba as well as the SALP and the operating experience. Next slide, please.

As Jim mentioned, the resources applied to the inspection program at Catawba have been extensive. We have involved a high percentage of Region II staff in these, and the inspection program as conducted by Region II at Catawba fully implemented the prescribed and exceeded the prescribed inspection program.

The construction inspection program included the monitoring of all construction disciplines, including quality assurance, to assure that the plant is built in accordance with the specifications.

This program was implemented by regional specialist inspectors as well as by the resident inspectors at Catawba. A construction senior resident was assigned to Catawba in February of 1980 and Duke stationed the Vice President of Construction at the site in May of 1982.

As far as the pre-operation inspection program, this inspection program commenced in 1983 and has included approximately 11,000 hours of inspection effort at Catawba, looking at systems testing and management control.

Like the construction inspection program, this effort is implemented by the specialist from the region as well as by the resident inspectors. A senior resident inspector of operations was assigned to the site in May of 1983.

The operational aspects of the plant, including pre-operation and start-up testing, procedural control, maintenance, periodic testing, training, security, radiation control, emergency preparedness and quality assurance have been reviewed and found satisfactory.

As I mentioned, our construction and pre-operational testing program has fully implemented the prescribed inspection program. Additionally, we have conducted a number of special

inspections at Catawba I'd like to mention briefly.

In 1981, a two-week inspection by a team of five inspectors was one of a series conducted to test the methodology which eventually resulted in the construction assessment team program. During that inspection, 120 individuals were interviewed, including engineers, construction supervisors, foremen, craftsmen, technicians and office personnel at Catawba.

The inspection findings and conclusions resulted in a complete review by Duke Power Company, their handling of approximately 10,000 nonconforming item reports.

Subsequent to this special inspection and special NCI review by Duke, the NRC resident inspector received and reviewed all nonconforming item reports for approximately two years and has performed periodic reviews thereafter of these reports.

Prior to that time, in November of 1979, a special inspection was conducted by a team of four inspectors that interviewed 53 craftsmen to determine if they were aware of any nuclear safety-related problems that should be brought to the attention of NRC. No specific allegations were received from these interviews.

A self-initiated evaluation using methodology developed by the Institute of Nuclear Power Operations to evaluate the effectiveness of the QA program and design and

construction was conducted by Duke Power Company and Tennessee Valley Authority personnel in the fall of 1982. The NRC staff was kept fully informed of the findings and a Region II team performed a comprehensive review of those findings. A number of items for improvement were identified. No significant technical findings were identified and no items were identified which were reportable.

All corrective actions resulting from this evaluation have been completed and verified.

In addition to the normal regional review of the technical specifications, during March D 84, the proposed Catawba Unit 1 technical specifications were reviewed on site by an inspection team comprised of seven inspectors. The in-depth review included verification that the installed equipment matched the technical specifications. Although a number of comments were identified, the as-found system matched the technical specifications.

Subsequently, a revision to the draft technical specifications was reviewed in the regional office with additional comments forwarded to NRR and incorporated as appropriate.

CHAIRMAN PALLADINO: Did those specs match the systems the first time around --

MR. OSHINSKI: Yes, sir.

CHAIRMAN PALLADINO: -- or did you have to go through

them again?

MR. OLSHINSKI: That was our finding, no. We matched it the first time. There were a number of clarifications, things that needed to be done with them which was basically terminology in the technical specifications. But the tech specs did match the equipment.

COMMISSIONER ASSELSTINE: John, did you also check the tech specs against the FSAR?

MR. OLSHINSKI: Yes, sir. And I don't know if there were differences -- there were no differences identified there.

COMMISSIONER ASSELSTINE: And how about the third leg of the triangle, the as-built plant to the FSAR?

MR. OSHINSKI: The as-built to the FSAR. There were some differences noted there and those were identified and corrected.

COMMISSIONER ASSELSTINE: Okay. And you double-checked to make sure that that didn't hurt the tech specs.

MR. OLSHINSKI: Yes, sir. We had gone directly -- what we started with was directly the equipment versus tech spec and then go back to the other.

COMMISSIONER ASSELSTINE: Okay. What kinds of differences, by the way, were there between the FSAR and the as-built plant, anything of real significance?

MR. SKINNER: Nothing of real significance, no.

MR. OSHINSKI: The senior resident of operations at

at Catawba, Pierce Skinner.

MR. SKINNER: The major significant differences they found was the number of detectors in certain systems. We had identified them as being two where there was actually one installed, and there were several minor valve identifications that were shown on the drawings that were not actually involved in the plant. But Duke had already discovered these and had design changes in to correct the deficiencies shown in the FSAR.

COMMISSIONER ASSELSTINE: Good. Thank you.

MR. OLSHINSKI: To sum up that issue, we do think the reviews were thorough and that results have been minimal needs to change the technical specifications since they have been issued.

An inspection was conducted during May of 1984 by a team of eight inspectors involved in the review of emergency abnormal operational maintenance and surveillance procedures, including the implementation of independent verification.

No violations were identified.

Following the inspection, Duke Power Company committed to complete additional training on emergency procedures and operating procedures and certain other actions. The issues associated with those procedure reviews have been and continue to be followed closely by the region. Corrective actions have been completed or are progressing

satisfactorily.

In addition, we conducted a training assessment during October of 1984 by a team of three inspectors, and this inspection identified several deficiencies in the area of operator training, walk throughs, training signatures and license preparation testing.

The licensee took corrective action.

In addition, the inspectors reviewed the Catawba requalification program and found it to be deficient in certain areas. These requalification concerns were forwarded to NRR who considered them in a review of the Catawba requalification program.

COMMISSIONER ASSELSTINE: Could you highlight some of the deficiencies in the requal program?

MR. OLSHINSKI: There was a grading criteria, accelerated -- I guess the procedures for accelerated requalification training when that was required; more specific criteria on removing operators from licensed duties, and requalification training scheduling issues, those types of things.

The inspectors also reviewed license applications for a second operator license group and found that errors which had been evident in the first operator license group applications had been eliminated and the applications were in order. The above concerns have been addressed and --

CHAIRMAN PALLADINO: What sort of errors?

MR. OLSHINSKI: There weren't differences between the commitments but there were differences between -- we found the training had been done as specified but the applications didn't very clearly identify exactly what that training was. Basically it's a match of the applications and the training listed on the applications versus the training records at the plant.

CHAIRMAN PALLADINO: I see.

MR. OLSHINSKI: Some of the dates may have been wrong for some of the training, and those types of things.

CHAIRMAN PALLADINO: Well, the errors weren't such that the people did not get their training.

MR. OLSHINSKI: No, sir, we did not find that to be a problem. The training was done as committed to. In some cases, we requested additional training because it would not have been -- I guess the training was not implemented in a manner we would have liked to have seen and Duke committed to do some additional training in those cases.

Appendix R, two team inspections were performed during April of 1984 consisting of two and four inspectors, and this performed a review prior to licensing. The implementation of Appendix R requirements touches a safe shutdown facility issue because Appendix R does include provisions for dedicated shutdown capability outside the control room. No

violations were identified in this inspection. However, there were 13 unresolved items identified and these included items such as procedural concerns and the types of surveillances, and fire protection features for redundant shutdown system cables.

A re-inspection of the items occurred in November of 1984 and we determined that corrective actions had been taken.

COMMISSIONER ASSELSTINE: Does that mean that all the open fire protection items are now closed down?

MR. OLSHINSKI: There is an issue that has been appealed. There was finally an inspection that was appealed by Duke to be considered in the backfit process, and that will be going on in the months to come.

COMMISSIONER ASSELSTINE: What's the nature of that issue?

MR. OLSHINSKI: The nature of that issue is the amount of fire protection associated with certain safety related cabling, separate from the safe shutdown facility. Their interpretation is one, and the inspection team interpretation was another matter. So, we'll take it through the appeal review process.

On NUREG-737, a special inspection was performed in March of 1984 to confirm the adequacy of implementation of NUREG-0737 items. Seven administrative and two hardware items were identified for follow-up and we were satisfactorily

closed in subsequent inspections.

As far as emergency preparedness is concerned, an appraisal was conducted in November of 1983 by a team of three inspectors, accompanied by three contract personnel. The appraisal identified ten deficiencies as well as numerous items for improvement and incomplete areas.

The licensee responses to the findings were timely and thorough. A full-scale exercise was conducted in February of 1984. Participants included local county officials, the licensee, the States of North Carolina and South Carolina, and the exercise was observed by an NRC evaluation team as well as FEMA. The exercise was successful.

Following the May 1984 hearing, the Licensing Board approved the emergency plan subject to certain license conditions. They involved improvement in the public information brochure and evacuation signs, and implementation of evacuation plans for a local amusement park.

The inspection program at Catawba has been extensive, as shown, and has included direct inspection and evaluation of the adequacy of construction and readiness for licensing, as well as including significant review and evaluation of the licensee corrective action programs.

COMMISSIONER ASSELSTINE: John, where do they stand on environmental qualification of electrical equipment?

MR. OLSHINSKI: That is scheduled -- let's see, I'm

going to have to turn to staff.

MR. MIRAGLIA: They have committed to comply with 50.49 by March 31, 1985, and that's reflected in conditions of license.

COMMISSIONER ASSELSTINE: Do you have any sense for how complete they are now, how many open items there still are and the significance of them?

MR. MIRAGLIA: No, I can't give you a judgment on that. Perhaps Dick Vollmer -- we can provide that later for you, sir, if you would like.

COMMISSIONER ASSELSTINE: Okay.

MR. OLSHINSKI: Based on our inspection program, we conclude that Catawba has been built and operated to date in accordance with the application and recommend that a full power license be issued.

I would like, to obtain another perspective, I would like to summarize the last three SALP ratings that have been issued on Catawba.

As you know, SALP provides three rating categories, categories I, II and III. In a September 1980 to May 1982 SALP, one area was evaluated as a Category I, and that was containment and other safety related structures.

Four other areas were rated as Category II. There were no Category III ratings on that SALP. A major strength was noted --

CHAIRMAN PALLADINO: Now, which SALP are you talking about?

MR. OLSHINSKI: This is 1980, September '80 to May 1982, okay, this is three SALPs ago.

A major strength noted in that SALP was in the considerable dedication at all levels towards producing quality work.

Two SALPs ago, and that was June '82 to April 1983, Category I ratings were provided for two areas, and that is piping systems and supports and quality assurance programs.

Category II ratings were provided for four other areas, and there were no Category III ratings assigned. Again, this was two SALPs ago.

CHAIRMAN PALLADINO: And that period again was?

MR. OLSHINSKI: That was from June of 1982 to March of 1983 -- excuse me, I said April earlier. So, that was two SALPs ago.

The last SALP was in May of 83 to February 1984, and in the construction area there was one Category I rating identified in that SALP and that was in the construction quality assurance program, and that was for the second straight SALP period that had been identified as a Category I.

There were six areas of Category II rating and no Category III ratings in the construction area. Since this was a traditional SALP between construction and operations and

pre-operations, ratings were also provided in the pre-operational testing area where two Category II ratings were assigned and two Category III ratings were assigned.

The two Category III ratings, one of them was in the operational QA program and the other one was in operator licensing.

In the operational QA program, the licensee had committed to have the operational QA program fully implemented 90 days prior to the issuance of an operating license, which was scheduled at that time for May of 1984. Many aspects of the operational QA program are still under development at the end of the appraisal period for SALP, which was within the 90 days of the scheduled license date.

Deficiencies identified in that program have since been corrected and the program has been implemented. In the area of --

COMMISSIONER ASSELSTINE: I take it from that that the III rating was basically that they hadn't completed what they had promised they would do.

MR. OLSHINSKI: They had not implemented the operational QA program, and my understanding is that that's an unusual commitment. Normally, the operational QA program is not required or committed to be in place until the operating license is issued.

COMMISSIONER ASSELSTINE: But I take it when it was

completed, it was done satisfactorily.

MR. OLSHINSKI: That's correct, yes, sir.

COMMISSIONER BERNTHAL: How often does Region II give two successive I ratings in construction QA?

MR. OLSHINSKI: That's a good -- I didn't check. I personally know of no other case.

MR. O'REILLY: I don't recall any other case.

COMMISSIONER BERNTHAL: What is it that's extraordinarily good about Duke's handling of that particular issue, in your judgment?

MR. OLSHINSKI: I think some of the things we have found -- and the resident inspectors may want to say something about this -- is they provided a lot of management oversight; they provided a lot of management attention down through the QC and QA area. Their evaluations have been in depth. They have a very significant engineering staff, so they are able to look at things in depth, and they -- you know, the QC program basically tries to identify, anything is identified and I think they devote a lot of management attention to the resolution of those items.

COMMISSIONER BERNTHAL: Is there anything special about the organization that attached to their QA or the number of people that were assigned to on-site inspections during QA?

MR. O'REILLY: I would like to respond to that. One of

Duke's strengths is that they have their own AE, of course --

COMMISIONER ROBERTS: They are their own constructor. That's quite significant.

MR. O'REILLY: And they have, you know, a very short chain of command. That tied in with the very strong engineering staff and organization of Duke that they react very strongly once they recognize that a problem exists. And then they have the short chain of command -- being the AE should fix it.

COMMISSIONER BERNTHAL: I mean, obviously the people thing is always the most important. Good people make any good organization work, or any organization work, maybe, no matter how poorly designed the boxes might be on the chart.

But are you saying, then, that in your judgment it essentially is just a qualitative aspect of the management and the way they interact with QA and there is nothing unique about the structure of the organization, the way it was set up, the number of people that were involved during construction; that kind of thing is not unique in your judgment?

MR. O'REILLY: No.

CHAIRMAN PALLADINO: Commissioner Roberts, do you have more?

COMMISSIONER ROBERTS: No, I just wanted to point out they are their own engineering constructor.

COMMISSIONER BERNTHAL: I understand, yes, yes, which is unique to be sure. But I'm just trying to get a sense of whether there is anything special other than the fact that -- the people that were involved.

MR. O'REILLY: They are experienced, too.

COMMISSIONER BERNTHAL: Experience, sure.

MR. OLSHINSKI: Very strong technically, and I think that's a big factor.

CHAIRMAN PALLADINO: But I do think it shows that close follow-up and management interest on the part of a utility does lead to better quality in construction.

MR. O'REILLY: Yes, sir. When they appreciate a problem exists, they are very reactive with a strong engineering staff.

CHAIRMAN PALLADINO: You want to continue, John?

MR. OLSHINSKI: The other Category III area that I want to mention was in the area of operator licensing, and that was a sign of the application problems that I had mentioned earlier, and those have been satisfactorily corrected and re-inspected in that particular area.

COMMISSIONER ASSELSTINE: John, were they rated on overall operations and on maintenance during the last SALP?

MR. OLSHINSKI: I believe we reated them on pre-operational start-up testing, not operations per se, and that was Category II.

COMMISSIONER ASSELSTINE: Okay, and maintenance?

MR. OLSHINSKI: The operator licensing we pulled out separately and made that -- maintenance, let me check if I got that. No, we didn't rate them separately in that SALP on maintenance.

COMMISSIONER ASSELSTINE: Okay.

MR. OLSHINSKI: The last thing I would like to mention briefly is the operating experience. Since the issuance of the July 18 fuel load license through January 1, 1985, it included 27 reported events that had averaged five licensee event reports and two 50.72 reports a month. An analysis of those events over that period of time by NRR and by Region II indicates that the experience at Catawba has been similar to other recently licensed facilities and does not indicate the existence of a major safety problem.

There has been one issue identified since January 1 in which the ice condenser doors were found by the licensee to be blocked closed when they should have been open. This matter is being considered by the Region for potential enforcement action, and a regional enforcement panel is scheduled to be held tomorrow on this issue from an enforcement standpoint.

CHAIRMAN PALLADINO: That sounds like such a major error, how did it come about? Has corrective action been taken?

MR. OLSHINSKI: The procedure called for the doors -- you know, specific on the doors -- to be unblocked and that procedure had been checked off. My understanding is that there was actually a work order issued to that effect and it could have been a communications error and never got there.

It was found by, our understanding is, by a health-physics technician who was going in to do surveys. He noted that, brought it to attention which I think is a very positive point. Independent verification wasn't required for that particular action, and that's a matter that is being reviewed now.

CHAIRMAN PALLADINO: I'm not bothered by the fact that the health-physicist found it, but that the people who were supposed to find it didn't.

COMMISSIONER ASSELSTINE: I gather part of the problem was, it wasn't to be independently verified.

MR. OLSHINSKI: That, in our view, yes, that's part of it.

COMMISSIONER ASSELSTINE: And it should be.

MR. OLSHINSKI: And the other part was, the person that signed off as it having been done, I think it's our understanding that he checked the work order which had had it done when that work order had not been carried out --

CHAIRMAN PALLADINO: Is that now an item to be verified?

MR. OLSHINSKI: The corrective action has been agreed on, but we would feel indpendent verification is something that should be done in a case like that.

MR. O'REILLY: We have pushed independent verification very aggressively. So, we look at this as, you know, sort of a repetitive type of failure. That's why we are looking at it rather aggressively.

MR. OLSHINSKI: As far as operating experience goes, we recognize of course that Catawba has only been operated critical since early January. The plant has operated primarily in Modes 3, 4 and 5 for the purpose of performing hot functional and precritical testing.

However, our observation of licensed personnel during the period since fuel load has been positive, without excessive errors, and the Catawba staff does appear to be a disciplined organization who has benefitted from these past six months of pre-operational testing experience.

COMMISSIONER ASSELSTINE: Have they gone critical yet?

MR. OLSHINSKI: Yes, sir.

I'd like to turn it over now to Paul Bemis who is the Director of the Division of Reactor Safety in Region II, and he will talk briefly about shift staffing.

COMMISSIONER ASSELSTINE: How about the loose screw problem, are you going to talk about that?

MR. OLSHINSKI: Yes, sir, we can talk about that. In

fact, I'd like Pierce Skinner to come up and talk about that because he has done all the details on it.

MR. SKINNER: The leach screw problem was identified by Westinghouse from a foreign plant, and this leach screw basically has the capability of becoming loose and coming out of its position and falling down into the mechanism and blocking the mechanism from functioning.

When Westinghouse informed Duke of this, Duke looked at the Unit 2 mechanisms which happen to be in the warehouse at Catawba and found several screws that would in fact back out. This is a manufacturing deficiency and was identified by Westinghouse.

As a result of this, Duke decided to bring Unit 2 down from a Mode 3 condition, cool down, remove the head and check all these screws. And as a result of this, they found 14 mechanisms that had to be replaced.

COMMISSIONER ASSELSTINE: Thank you.

COMMISSIONER BERNTHAL: Let me just ask one more question on that. I'm not sure my understanding is correct here, but I guess my impression is that it was really a manufacturing defect rather than a design defect that led to this problem. Nevertheless, design defects often lead to manufacturing defects if there is marginal design for one reason or another.

What has been done to correct the problem -- or

correct me if my understanding of how the problem originated is not correct.

MR. SKINNER: Well, the problem primarily stemmed from the fact that when this little screw is inserted, there is a small hole drilled next to the thread section and this is what is very close tolerance, and if this small hole is drilled off and misses its tolerance, it will not prevent the screw from backing out.

COMMISSIONER BERNTHAL: I think you just told me it was in fact a manufacturing defect.

MR. SKINNER: That's correct.

COMMISSIONER BERNTHAL: But you also have said that it sounds like the design left something to be desired. What has been done now to, if anything, to correct the design or are we going to just go ahead trying to manufacture them better?

MR. SKINNER: I don't know what Westinghouse are doing on the design.

MR. OLSHINSKI: Let me just mention one thing. This particular screw arrangement is unique to just a few plants. That is being checked on all the plants and right now they have been able to replace the mechanisms with ones that have been manufactured correctly.

If they are getting to the point of meeting one that needs to be revised, I'm not so sure what Westinghouse

has settled on. It could be drilling another hole for the pin. All the pin does is really basically just stress the screw so it can't back out. That could be the case.

COMMISSIONER BERNTHAL: That's enough said. Thanks.

MR. BEMIS: Can I have Slide 6, please?

Good morning, gentlemen. I am going to talk about shift staffing at Catawba. Catawba is presently on a four-shift 12-hour rotation and will remain there until near the end of the start-up program.

Duke has operated on a 12-hour shift for about two years and has had favorable results. Observations by NRC inspectors have not noted any detrimental effects from a 12-hour shift at Catawba -- either at Catawba, Oconee or Maguire.

In order to maintain maximum experience on each shift through the start-up program. Duke has requested that the implementation of their five-shift 12-hour rotation be postponed until approximately April of '85.

As you can see from the right-hand column of the slide, licensed personnel had considerable nuclear experience, yet the hot operating experience at greater than 20 percent power is typically three or four months.

Duke has provided shift advisers who are former and present SRO licensed individuals at Maguire and Oconee, and they will remain on the shifts until hot operating

experience is gained.

We have a license condition that will require this, and as part of that there is a 30-day notice that Duke must give to us prior to removing these shift advisers off the shift.

The shift advisers have been trained at Catawba --

CHAIRMAN PALLADINO: What was that again, they provide 30 days notice to take off the shift advisers?

MR. BEMIS: To the Commission before they remove shift advisers, yes.

CHAIRMAN PALLADINO: Remove them?

MR. BEMIS: Remove them from the shifts, that's correct.

COMMISSIONER ASSELSTINE: Once their normal operators have gotten sufficient hot experience.

MR. BEMIS: That's the idea, correct.

The shift advisers have been trained on the Catawba systems and procedures and they do exceed industry standards for this position as determined by the Industry Proposal Group and verification by NRC inspection.

The shift advisers are not shown on the slide since they are not licensed at Catawba. I would like to go over to the shift complement that you will be seeing at Catawba. They will have one shift supervisor who is an SRO; one unit supervisor who is also an SRO; three nuclear operators who

hold RO licenses; one shift technical adviser who will also hold an SRO, and these shift technical advisers are all engineers except for one individual who also holds a scientific technical degree, I believe it's chemist.

With the complement of licensed and former licensed experience, the staff experience guidelines are exceeded and we are using ANS 3.1981 to make that determination.

If we are going to power plant and educational experience of Catawba management, the experience and background of key plant management meets or exceeds that stated in the Catawba final safety analysis report. Most of the senior management at Catawba has been with Catawba since the beginning of construction and gone throughout construction.

The plant manager at Catawba was the assistant plant manager at Oconee and he held an SRO license at Oconee. The operations superintendent was also an SRO at Oconee and he went through SRO training at Maguire. So, he is familiar with the complement system.

Regarding the competence of plant management to successfully sustain safe nuclear power operation, it is realized that Duke Power has sustained operation of the Oconee and Maguire Stations for a number of years. Through this operation, they have built up a competent corporate technical and maintenance support organization that has been, is, and will continue to be beneficial to the utility.

Although critical operational history for Catawba is not available at present, or not considerable in any case, latest pre-license SALP data indicates that overall plant performance has been in the area of II.

COMMISSIONER ASSELSTINE: Paul, you mentioned that you didn't see any detrimental effects from the 12-hour shift arrangement.

MR. BEMIS: Yes.

COMMISSIONER ASSELSTINE: Let me turn it around and ask you if you have seen any positive benefits.--

MR. BEMIS: I can tell you --

COMMISSIONER ASSELSTINE: -- particularly in terms of morale and those kinds of things.

MR. BEMIS: The maintenance crew likes the idea so much that is being applied to the operations crew that they are pushing now to try and get on that themselves. The benefit to this is, once you go into this, and it's full implementation, it's my understanding you really don't operate more than about three days in a row with days off. And it's something like once a quarter or so, you get something in the area of eight to ten days straight off. So, they really like that idea.

COMMISSIONER ASSELSTINE: Okay. Yes, I gather there is a good deal of industry interest in this approach and how it is working.

MR. BEMIS: Yes. It hasn't really been implemented in this country before. I think Canada is the first place that they implemented it.

CHAIRMAN PALLADINO: Do you see any benefits, aside from the time off, to this? One of the points I think that was made to me was that having longer shifts, they don't have to have as many communications as they change shifts.

MR. BEMIS: Turnovers, that's correct, yes.

CHAIRMAN PALLADINO: Are there any other advantages?

MR. BEMIS: We are watching it. Those are the major advantages. I think it makes a big difference if the morale is up on the operating crews.

COMMISSIONER BERNTHAL: And it certainly is important, I think, to have as few interfaces as possible between crews as you can, and the number of turnovers is just naturally minimized. Problems get communicated better, presumably.

I was under the impression that at some point the licensee was going to six shifts, however, or am I mistaken? Was it always going to be five, or are you planning to --

MR. BEMIS: From my discussions they are not immediately looking at six shifts.

COMMISSIONER BERNTHAL: I see.

MR. BEMIS: The five twelve-shift rotation gives you essentially exactly the same thing as the six eights does.

COMMISSIONER BERNTHAL: I am sure that I asked this question months ago, but let me ask it again. I'm still curious how it happened -- and remind me again that Duke who is one of the most experienced, certainly and I suppose one might say most reputable nuclear power operation -- has managed to get caught short in the area of qualified people that they were able to bring to bear easily to meet the industry standard and themselves had to resort to the shift technical advisers.

Was that partly by intent because they knew they had qualified technical advisers within their own organization, or is it just that this crept up on them, or how did that happen?

MR. BEMIS: Not shift technical advisers, shift advisers.

COMMISSIONER BERNTHAL: Shift advisers, I'm sorry.

MR. BEMIS: It's my understanding that it was primarily decided that since they did have a large group to draw from at their other two facilities, that rather than go out and either hire the people in, if you will, earlier, that they could take advantage of the hot experience that they had with people at the other sites.

COMMISSIONER BERNTHAL: I see.

COMMISSIONER ASSELSTINE: Wasn't also part of it avoiding having to shift people around, too, rather than

taking the people who were licensed operators at Oconee and Magure and transferring them over --

MR. BEMIS: Yes.

COMMISSIONER ASSELSTINE: -- to deal with it on the shift adviser basis and leave the crews pretty much intact.

COMMISSIONER BERNTHAL: So, this wasn't an entirely unplanned happenstance, then.

MR. BEMIS: That was my understanding.

CHAIRMAN PALLADINO: You might want to raise that question with the licensee.

COMMISSIONER BERNTHAL: Thank you.

MR. VOLLMER: Dick Vollmer, Division of Engineering to answer the environmental qualification question.

Based on the review of the licensee's information and the details out of the plant, there were three equipment types that did not get full qualification by the staff. This is detailed in Supplement 3 to the SER.

One is an electrical termination panel which the licensee says he will relocate into an area which will not have the environment that it couldn't be qualified to. And there were some electrical penetrations and some selenoid valve operators which could not -- qualification could not be demonstrated to last the time we require in a harsh environment, although other qualification requirements could be met.

We have received justifications for interim

operation on those items, in other words, the licensee has shown that safe shutdown could be achieved even if these particular items failed.

He has also committed to achieve full qualification by March 31st of '85.

COMMISSIONER ASSELSTINE: And I take it you have reviewed the JCOs and are satisfied?

MR. VOLLMER: We have reviewed the JCOs and are satisfied on those. So, we think they are in really good shape as a generic plan in this area.

COMMISSIONER ASSELSTINE: Good. Thank you.

MR. BEMIS: Our next speaker is going to be Bruno Uryc on allegations.

MR. URYC: Good morning. My name is Bruno Uryc and I am the Allegation Investigation Coordinator in Region II.

During the period 1977 to the present time, Region II opened 29 allegation case files regarding the Catawba Nuclear Plant. These 29 case files contained 82 separate allegations ranging from the alleged improper use of weed killer in the pipe lay-down yard to the alleged harassment and intimidation of quality control inspectors.

Sixteeen percent of the total allegations were received during the period 1977 through 1982. The remaining 84 percent were received during the latter part of 1983 and '84.

Four former employees from the Catawba Nuclear Plant

accounted for 49 percent of the total allegations.

The Catawba Nuclear Plant was subjected to intensive regional and headquarters investigative resources and underwent a lengthy ASLB hearing. NRC resources that examined some of the issues not only included the Region II staff but investigations were also conducted by the Office of Investigations and the Office of the Inspector and Auditor.

In addition, investigative actions by the licensee represented a significant licensee commitment which was closely monitored by the Region II staff. Allegations were also closely coordinated on a routine basis with the Region II Office of Investigations.

Region II has expended a tremendous amount of inspection effort at the Catawba Nuclear Plant and, as mentioned earlier, some of this effort was in the form of special inspections which were specifically directed at examining workers' concerns.

In reviewing allegations for the Catawba Nuclear Plant, the vast majority were related to construction activities, and the major portion of the allegations were raised by concerned workers. Some of the later allegations were brought forward during special in-camera sessions conducted by the Atomic Safety and Licensing Board and were subsequently followed up by the Region II staff and the licensee.

It is noteworthy that during this hearing the ASLB advertised both on and off the site that they were interested in listening to concerns or to any concerned employee who wanted to bring forth concerns regarding the construction of the plant. Four individuals eventually came forward to present testimony at the ASLB.

In following up on the allegations from the ASLB, the Region II staff conducted over 80 personal interviews in addition to numerous technical evaluations. The Region placed a high priority on resolving concerns and in one particular case expended over 500 man-hours on examining concerns expressed by former workers.

At the present time, there are no allegations open for the site. Thank you.

MR. O'REILLY: In summary, we have a long and favorable history of interfacing with the Duke Power Company. We looked at Catawba over a very long period of time in detail with many different inspectors with excellent technical credentials and regulatory attitudes. We have no outstanding issues that are unresolved or not incorporated in a proposed full power license.

Accordingly, we have recommended to NRR our support for a full power license, noting of course that we will continue to implement the prescribed program during the power ascension testing phase and routine operation.

We do intend to perform a special operational performance evaluation inspection before Duke Power Company exeeds 50 percent power.

COMMISSIONER ASSELSTINE: Is that a routine thing, Jim, or something special?

MR. O'REILLY: Well, we started before but we put a lot of attention to the 50 percent power inspection at Grand Gulf.

COMMISSIONER ASSELSTINE: Okay.

MR. O'REILLY: And we found that to be very informative and revealing, and it was also very good with regard to the training of our own staff, and we intend to pursue it with Catawba and perhaps in the future.

COMMISSIONER ASSELSTINE: Okay.

CHAIRMAN PALLADINO: All right, thank you.

MR. MIRAGLIA: I would like to discuss one more or two more matters, Mr. Chairman.

The initial draft full power license was sent to the Commission on December 4 of 1984. We subsequently issued a low power license on December 20, and that package was provided you on December 24th.

There have been some minor changes in those license conditions and I wanted to call them to the Commission's attention. The changes are the result of continuing dialog with the utility and review of information that he had provided.

There had been deletion of two license conditions. License Condition 2-C-20 which was in the draft license provided to you dealt with the internal corrosion protection on fuel oil storage tanks. The utility has provided additional information to the staff. We have reviewed that information and an additional technical specification has been added to the license which would require inspection. The staff has found this to appropriately resolve our concerns and therefore the condition of the license has been removed.

CHAIRMAN PALLADINO: Is this a plant that had a leak in the spent fuel pool, or am I thinking of something else?

MR. MIRAGLIA: A suspected leak, yes.

MR. O'REILLY: We are not even sure there is a leak, that is the type of level we are talking about.

MR. MIRAGLIA: This is a fuel oil storage tank, this particular license condition I was discussing.

The second matter is License Condition 2-C-25 which was a license condition that was placed in the license as reflected in the ASLB initial decision, and it had to do with the promulgation of a harassment policy by Dule Power Company. There was a date that that had to be completed on or before, December 22, 1984. Duke Power Company has issued that policy. The Region has followed up to assure that the policy has been promulgated. There is an inspection report closing that matter out, and therefore that condition of the license has

been completed.

CHAIRMAN PALLADINO: I hope it's a "non-harassment" policy.

(Laughter)

CHAIRMAN PALLADINO: Excuse me.

COMMISSIONER ASSELSTINE: I take it that not only has the policy been developed, but the staff has reviewed it and are satisfied with it.

MR. MIRAGLIA: Yes, sir. And there is an inspection report that documents the staff's review of that.

There are two other minor changes in dates, two conditions, which are again the result of review of additional information provided by Duke since we sent the package down, License Condition 2-C-6 which dealt with the in-service inspection program. Duke has provided additional information on the in-service inspection program. The staff has reviewed that information and there is a subsequent submittal that was due on the 31st of May for the balance of the in-service inspection program.

So, that condition has been updated to reflect the on-going review. The previous condition was by January 18th submit something to the staff for its review. They have submitted that and that review has been completed and there is an additional piece to be provided on May 31st now. So, the license condition has been modified to reflect that.

And there has been an additional change having to do with the commitments made with respect to Generic Letter 8328, which was some of the Salem ATWS event follow-up. That was License Condition 2-C-22, and there has been a date change in that condition.

COMMISSIONER ASSELSTINE: How much of a date change on that one?

MR. MIRAGLIA: The condition refers to meeting commitments in a number of letters, and it puts in the most recent letter that we received, it's a December 31st letter from the utility.

COMMISSIONER ASSELSTINE: Oh, okay, fine.

MR. MIRAGLIA: So, it's again a codification of the review process as it exists today.

COMMISSIONER ASSELSTINE: Okay.

MR. MIRAGLIA: Another matter that the Commission should be aware of, there is one outstanding 2.206 Petition that the staff has yet to act upon It's a matter that the staff is fully aware of and has evaluated, and does not see that to be a bar to the particular recommendation that the staff is going to make hre today.

We thought we would call that to the Commission's attention.

In conclusion, the staff concludes that the licensee has satisfied all the requirements for the issuance of a

full power license and the staff recommends that the Commission authorize the staff to issue a full power license for Catawba Unit 1.

CHAIRMAN PALLADINO: Thank you. Any other points? I open it to Commissioner questions. Tom, do you have any questions, Jim?

COMMISSIONER ASSELSTINE: No.

COMMISSIONER ZECH: I have one question. I think you referred, Mr. Chairman, to the leakage -- as I understand it, it was in the auxiliary building and perhaps from the spent fuel pool. Could you elaborate on that?

MR. O'REILLY: Yes. Our senior operational inspector will give you either a ten-sentence repsonse or one-hour response. Pierce?

CHAIRMAN PALLADINO: Try the ten-sentence or less.

(Laughter)

COMMISSIONER ZECH: Short and concise, and to the point.

MR. SKINNER: The first time that they filled the pool up, they noted they had a slight amount of leakage in one of the lower-level rooms in the auxiliary building. They cannot determine exactly where the leakage was coming from. They measured the leakage rate and the rate started off at 750 milli-liters per hour and gradually, in four days, decreased to zero.

As a result of this, they felt that they may have a leak in the fuel pool. They pumped the water out of the fuel pool, pulled all of the storage racks out of the way and went down and did a full-scale investigation of every well and every possible potential leakage path that they could find.

And as a result of this, they found no leakage path at all that has been identified.

COMMISSIONER ZECH: Well, has the leak been stopped?

MR. SKINNER: They are in the process now of getting prepared to refill the pool back up to try to determine whether or not that the leakage originally occurred as a result of having some water trapped between the concrete and the pool liner, and as they filled the pool up, the liner expanded slightly and squeezed this water out.

CHAIRMAN PALLADINO: Has the water been appearing in the auxiliary building still?

MR. SKINNER: Well, the pool has been empty now for the past four months.

CHAIRMAN PALLADINO: But has that stopped the flow of water in the auxiliary building?

MR. SKINNER: It had already stopped before they even pumped the pool down.

COMMISSIONER ZECH: So, are we to conclude that you are still investigating?

MR. SKINNER: The conclusion is, they have not determined fully yet that they do in fact have a leak in the pool, and the investigation is still being pursued.

COMMISSIONER ZECH: I see. Thank you.

CHAIRMAN PALLADINO: Do you have any questions, Fred?

COMMISSIONER BERNTHAL: No. Are we going to hear from the licensee?

CHAIRMAN PALLADINO: Yes. If there are no further comments by the Commission, we had next planned to have a representative of Palmetto Alliance speak for five minutes. That representative, Mr. Robert Guild, is he here, please?

MR. GUILD: Yes.

CHAIRMAN PALLADINO: I wonder if you would join us at the table, and Secy will time us.

MR. GUILD: My name is Robert Guild of Charleston, South Carolina. I am appearing on behalf of the Palmetto Alliance of South Carolina and the Carolina Environmental Study Group of North Carolina, asking the Commission to exercize authority under Section 2764(f) of the Rules of Practice to stay the effectiveness of the Licensing Board decisions in the Catawba proceeding pending administrative and judicial review of those decisions.

The rosy picture of Catawba painted to you by your staff and likely by the applicant simply is belied by the

record before the Licensing Boards with which I am familiar.

I want to strike a couple of general themes in the short period of time that I have before you gentlemen. The first is that the Catawba record in the licensing proceeding reflects a serious erosion of the fundamental principles behind your quality assurance requirement, those principles particularly related to the effective independence of quality assurance from cost and schedule pressures such that we have confidence that the quality assurance organization effectively identified and sees that deficiencies important to safety are corrected.

Secondly, the second theme I want to strike today is that the record in Catawba in my judgment reflects an impermissible erosion of the Commission's adjudicatory processes which in my opinion are designed and should be supported to effectively resolve and correct safety problems that relate to the construction and operation of nuclear power plants.

The two themes are interrelated because, of course, the quality assurance failures at Catawba were the central focus of the adjudicatory proceedings, and the focus which I think should be of greatest concern to this Commission.

In addition, I'll mention briefly a number of important safety issues which were presented to the Licensing Board but for which we were deprived an opportunity for hearing

through impermissible application, in our view, of the Commission's Rules of Practice with regard to litigation of contentions.

I want to reflect the status presently, and that is that we have appeals pending from the three partial initial decisions, the June decision on principally quality assurance; the September decision on emergency planning, and the most recent November 27 partial initial decision resolving so-called foreman override concerns -- again a quality assurance issue.

I have filed briefs on the merits with the Appeal Board as of the 10th of January. The matter is pending before your Appeal Board. We also filed a petition for review in the Court of Appeals for the District of Columbia Circuit the first week in December, sought a stay at the point when this Commission was to authorize low power operations, and anticipate in expectation of an authorization for full power from this Commission again seeking an emergency stay from the Court of Appeals as soon as we can get our papers filed.

We would submit that no conceivable cognizable harm will flow to Duke Power Company if this Commission honors its adjudicatory process so that an orderly review of the Catawba record can take place.

The Catawba facility, according to the North County

Utility Commission public staff should be deferred until 1996 and 1999 respectively. It's power is not economically necessary for the Duke system for at least four years. The only conceivable interest that Duke has, of course, is getting the plant in rate base and rewarding its customers with its promised 20 percent increase in residential electric rates.

I want to emphasize that we consented to a fuel load license in July because it wasn't our desire to delay operation of the Catawba facility, and we consented therefore to allow testing, precritical testing, to proceed and it has. That's why we find ourselves in the posture we do where in the first week of January you authorized low power operations and here, hardly in the blink of an eye, they are before you for full power operations without any review of the Licensing Board decision which raised important quality assurance issues.

We will hear from the licensee, I am sure, about the cost of delay. Let me only point out that but for Westinghouse informing them of the loose screw problem in early December, we would have operated the plant with a significant margin of safety reduction, and the licensee themselves have implemented almost a month's delay to correct this problem at a cost that they have incurred because of their quality assurance failure to adequately check vendor supplied designs and vendor supplied equipment.

In the brief minutes I have, let me turn to the quality assurance record. The record before the Licensing Board simply reflects a different plant from that which your Region II staff has described to you.

I want to emphasize to the Commissioners that the 2.206 Petition that remains pending is with regard to whether or not the NRC will take any enforcement action whatsoever based on what the Licensing Board found -- not your staff but the Licensing Board found -- with respect to harassment, retaliation and discrimination in violation of your own regulations and Appendix B against senior quality control inspectors by senior Duke management.

The Licensing Board finding was that the corporate quality assurance manager, Mr. George Greer, and the site quality assurance manager, Mr. Larry Davison, both responsible over a long period of time for assuring compliance with this Commission's regulations and that the plant was built correctly, were found responsible for illegal discrimination against a senior quality control inspector, Mr. Gary Ebo Ross. No enforcement action has been taken whatsoever.

I ask you to ponder when in other regions under this Commission's jurisdiction such conduct would bring swift and prompt, and severe enforcement action, why has that not been taken against Duke?

I submit to you that Duke has benefitted unduly from

the very trust which this Commission and staff has placed in it because of its prior history as a nuclear licensee. That trust is not deserved in my opinion at least as reflected in the Catawba record.

I want to point out only that in your first SALP report, not mentioned by the NRC staff, Catawba was rated among the seven below average plants under construction.

CHAIRMAN PALLADINO: Mr. Guild, I hate to interrupt, but your time is up. Could you complete in about two or three sentences?

MR. GUILD: Yes, I'll be happy to do that, Mr. Chairman.

CHAIRMAN PALLADINO: All right, thank you.

MR. GUILD: I submit to you that a review of the record before your own Licensing Board reflects that the Licensing Board here performed its function, albeit it ineffectively, but that is through the adversary process where interested parties bring to this Commission evidence that reflects on the safety of construction. That they attempted to resolve those safety questions.

However, under the overriding influence of what they understood to be this Commission's direction to license Catawba at any and all costs by Duke's proposed operational schedule, the record before the Licensing Board is inadequate to support the finding of safety that is required by the

Atomic Energy Act as applied by the court. And by this Commission's decisional authority we ask you to stay effectiveness of the license decision to permit us to litigate the safety issues which we have attempted to raise before the Licensing Boards and to permit an orderly review before your Appeal Board of the serious quality assurance flaws that are reflected in the Catawba licensing records.

I appreciate the opportunity to appear and adress the Commission.

CHAIRMAN PALLADINO: Thank you very much. Any questions by Commissioners?

All right, thank you. Well, then next we will proceed to hearing from Mr. Warren Owen, the Executive Vice President for Duke Power Company who also has five minutes.

MR. OWEN: Mr. Chairman, thank you very much. I've only got a very brief statement and I believe there were a few questions left on the table and we would be happy to try to speak to those as we recall them, and then answer any questions that we might leave unanswered by that.

I would just like to say that I am convinced personally that the Catawba plant has been built and will be operated to satisfy your requirements and to meet your standards. But much more important to me, it has been built and will be operated to meet our standards which we think are

in excess of any kind of minimum regulatory requirement that you might set.

You asked a couple of questions which I will try to recall and answer. There was a question about the make-up of the Electric Membership Corporations that are partial owners of Unit 1.

The North Carolina EMC -- Electric Membership Corporation -- is the state-wide organization in North Carolina for such rural electric cooperatives. It holds title to 56-½ percent ownership of Unit 1. They are financed by the Rural Electric Administration of the U.S. Department of Agriculture.

The Saludo River Electric Cooperative, Inc., is a similar organization in South Carolina and owns a little over 18 percent of the plant, as I recall. So, that is the make-up of the other owners of Unit 1.

CHAIRMAN PALLADINO: But now even though, according to the information the staff provided, Duke Power has only 25 percent ownership, you will operate?

MR. OWEN: We were the designers, the builders, and we have been retained by the other owners as their agent to operate the plant. It will be operated as if it was a totally owned Duke power plant.

COMMISSIONER ASSELSTINE: You are the only licensee.

MR. OWEN: We are the licensee, correct.

CHAIRMAN PALLADINO: And you have the authority, then.

MR. OWEN: Yes, we have all the authority. We are co-licensees, Hal reminds me. But we are responsible totally for the operation.

MR. MALSCH: Yes. If this license is typical, typically what is done is that the NRC separately licenses ownership and operation, and so you would typically see a number of entities licensed to own, but only one licensed operator. I suspect that is the situation here.

COMMISSIONER BERNTHAL: I am curious -- it may or may not be a safety issue, I shouldn't use that terminology I guess. It may or may not be a question of safety.

But I am curious how the responsibility gets shared then. Is the responsibility and therefore in some sense the liability entirely Duke's for the operation of the plant, or how does that work institutionally?

MR. OWEN: Commissioner Bernthal, let me ask Steve Griffith. Steve is our Senior Vice President and General Counsel and was actively involved in all of those arrangements which were made some number of years ago, to respond to that question.

MR. GRIFFITH: We have a contract with all of the owners for the operation and fueling of the Catawba units. Duke is to dispatch the unit as if it were wholly-owned by Duke Power. The other owners have no say-so with respect to

whether the plant operates or not.

Now, there are some financial consequences. If Duke were to shut the plant down for some reason wholly within its power, then of course it would bear a financial responsibility.

Duke is required to obey all of the regulatory requirements of this Commission and any incident that would occur that would require its shutdown for safety reasons is provided for in the contract.

COMMISSIONER BERNTHAL: But I think there is a significant point here, that Duke then has in fact assumed the responsibility and the liability if that plant fails to operate for a reason which clearly can be shown to be the fault of Duke Power. Am I understanding things correctly?

MR. GRIFFITH: Well, the liability is a shared one by all of the owners, and of course it is covered -- any damage to the plant by reason of any accident would be covered by the insurance that is available from the insurance market, and of course is covered by the Price-Anderson Act.

COMMISSIONER BERNTHAL: Yes, I understand that. But what I'm really trying to get at is, is there any special liability or responsibility that is assumed by Duke as the operator? I suppose one could pick a trivial example, that you all decided to take a vacation for a day and the plant fails to operate for that day or, more importantly, that there

is something shown to be the fault of Duke management that may or may not be a matter of safety and the plant fails to operate. I'm just probing, trying to see whether in fact you have assumed a special share of responsibility.

MR. GRIFFITH: We do have a financial liability with respect to the operation of the plant in the fact that it is designed, the plant is designed and the other owners recognize it is to meet the load of the entire Duke Power System. And when it does not operate, it is a substantial part of that system, representing approximately ten percent of our present system-wide load.

So, when that plant does not operate, there is a financial liability, so to speak, with respect to Duke because it is a base-load plant on the Duke System and the arrangement with the buyers is that Duke would have to supply that power which the Catawba plant would have provided. There is a cost associated with that, so that the shareholders of the company and the management of the company would carry a financial responsibility if that plant is not reliably operated.

Now, of course if there are reasons beyond Duke's control for the plant to have to shut down, then that financial responsibility is shared by all of the owners.

COMMISSIONER BERNTHAL: But there is a contractual statement and agreement in effect, then, on that very word --

MR. GRIFFITH: Yes.

COMMISSIONER BERNTHAL: -- on those words in point beyond Duke's control.

MR. GRIFFITH: That's correct.

COMMISSIONER BERNTHAL: Well, I think that's very interesting and I must say, I commend Duke for being willing to step up to the plate and assume that kind of responsibility and take on the implied responsibility that it carries with it. It seems to me, in view of the fact that you have a 25-percent stake as such but are operating the plant under that kind of a contractual arrangement, I think that's a significant development, perhaps, in the history of plant operations in this country. There may be other similar circumstances.

MR. GRIFFITH: I would like to point out further -- and this has not been mentioned -- that the two units at Catawba are shared so that if you own in one unit, you have a right to the output of the other.

And in addition to that, we have an exchange with the Maguire units which has been mentioned are very similar to the Catawba units in size, design, and operation. So that Duke has put its two units at Maguire into the pot, so to speak.

COMMISSIONER BERNTHAL: Yes.

MR. GRIFFITH: And when the Catawba units are not

running -- for refueling or whatever -- all of the owners of the Catawba units will get power pro rata out of the Maguire units and vice versa.

It's a sharing of the risk of the units being down for whatever reason because of the operation being so much cheaper than the alternative of coal, oil, or whatever.

COMMISSIONER BERNTHAL: Yes. My question, though, I guess then finally is a simple one. Is there any other case -- there probably are -- where a plant is minority owned, in other words, you have a minority interest, but where you in effect have assumed majority responsibility for the operation of the plant? How unique is this --

MR. GRIFFITH: To my knowledge, this is unique. Now, the Yankee plants are a different situation where you have the corporate --

COMMISSIONER BERNTHAL: That is different, yes.

MR. GRIFFITH: -- a different situation. But I do not know of any other power plant in which the utility has a minority interest. But when you factor in the two Maguire units into the operation and you take into account that this unit is providing ten percent of the load of the Duke System, then the Duke Power Company, while it has a very small interest in the ownership of the plant, has a very large interest --

COMMISSIONER BERNTHAL: Exactly, that's the point.

MR. GRIFFITH: -- in the operation of the plant.

COMMISSIONER BERNTHAL: I think that's an important point not to be missed here. I have taken enough time.

CHAIRMAN PALLADINO: Okay, thank you. Were there other questions?

MR. OWEN: There was one question, Mr. Chairman, concerning the emergency planning requirements that were left on the table that we were to meet. There were five of them. One had to do with some changes in the emergency planning information booklet. That booklet has been reprinted. All those changes have been made and it's in the process of being distributed right now and will be completely distributed by March.

There were some changes required to signs and decals, the handling of transients who might be in the area. Those have been proposed and are being reviewed by the NRC and will be implemented when that wording and signage has been settled.

There was a requirement for upgrading of the planning at the Carawinds facility, a theme park. That has been done. It's in review right now. It's being fine-tuned and it will be in place by, I believe, May of 1985.

There was some training in Gaston County that's on-going right now, and there were some changes to be made in the South Carolina plant to clarify the responsibilities of

the Division of Public Safety in the Office of the Governor. That is virtually wrapped up at this stage. They have made a proposal and we are in the process of working that through the system.

I think we have met those. Those were two questions. Hal, do you recall others?

CHAIRMAN PALLADINO: I think that probably covers it, unless somebody has it written down. I want to see if there are other questions Commissioners may have now.

COMMISSIONER ZECH: No.

COMMISSIONER ASSELSTINE: No.

MR. OWEN: If I could, I just would like to say one thing. Someone discussed the question of people and motivations, and what not. Our goal at Duke Power is to be Number One. We want an environment which promotes excellence and professionalism that permits us to in fact attract and retain good people.

I would just like to close this by saying that Catawba is a good plant. It's ready to take its place in our fleet. I'm proud to be associated with that staff and they are ready to go.

CHAIRMAN PALLADINO: Okay.

COMMISSIONER BERNTHAL: A quick question, Warren, that I think I owe you a chance to respond to since I had raised the issue of whether it was planned or unplanned that

you ended up with this particular shift adviser situation. In some cases those situations have been unplanned, in fact, as you know. You know it perhaps better than many people.

Was this a case of the issue coming to attention rather late and your being involved with the owners group, of course, have been very familiar with it as it developed as an issue; or is it a case, as seemed to be indicated earlier, where you felt that your institutional strength and personnel resources were such that you could plan to run things that way?

MR. OWEN: Our plans have always included doing the necessary training and being fully prepared to meet any obligation that we undertake.

As you know, there is a substantial lead time in developing completely trained and competent operational personnel, and we had those people in the pipeline. Requirements expanded over the last three or four years to the extent that we may not have or we did not have sufficient people in the pipeline to fully meet that.

It was never our intention to compromise in any respect. But let me ask Hal Tucker, who is our Vice President of Nuclear Production, to see if he has anything to add to that.

MR. TUCKER: The main contributor to that was an acceleration of our schedule. We ended up bringing this unit

into service approximately twelve months earlier than we originally anticipated. Consequently, instead of going with our original plans of having three co-licensed groups, we had to resort to two co-licensed groups to meet the schedule of turn-over of equipment in the plant, pull people out of training.

Consequently, we were not able to carry out our plans of having the experienced, on-hand participation at Maguire and Oconee that we originally planned.

CHAIRMAN PALLADINO: Okay, thank you. Other Commissioner questions?

COMMISSIONER ZECH: No.

COMMISSIONER ASSELSTINE: No.

CHAIRMAN PALLADINO: Well, let me ask the Commission if it wants a recess, or are you prepared to entertain a vote?

COMMISSIONER ASSELSTINE: I don't need a recess.

COMMISSIONER ROBERTS: Let's go.

CHAIRMAN PALLADINO: Okay. Well, then thank you, gentlemen.

Let me ask the question of the Commission: Would you authorize the staff to issue the full power license for the Catawba plant Unit No. 1?

All those in favor indicate by saying "aye."

COMMISSIONER ZECH: Aye.

COMMISSIONER ROBERTS: Aye.

COMMISSIONER BERNTHAL: Aye.

COMMISSIONER ASSELSTINE: Aye.

CHAIRMAN PALLADINO: Aye.

Opposed, I didn't hear any that didn't say "aye."

Now, there is a question that was raised by General Counsel, and that was whether or not we wanted to make this immediately effective as soon as the staff issues it.

I think there was a poll taken of the Commission. Let me ask Secy the results of that poll.

MR. CHILK: The majority of the Commission, Mr. Chairman, has voted to have that license immediately effective.

COMMISSIONER ASSELSTINE: I guess I'd just say, you are going to end up with a stay, just a housekeeping stay, while the courts look at it. It's going to take longer that way than if the Commission would act as we have in other cases in the past.

But if you want to do that, so be it.

CHAIRMAN PALLADINO: Yes. Incidentally, I felt the same way. I think the wisdom would have indicated that at least a 24-hour stay would have been appropriate.

COMMISSIONER ASSELSTINE: That's right.

CHAIRMAN PALLADINO: But I think the majority has spoken, so --

COMMISSIONER BERNTHAL: Well, maybe it's worth

having General Counsel comment on that. It seems to me it's a legal question that we should hear comments on.

MR. MALSCH: Well, we are not talking here about any kind of legal requirement. The question is whether in the event a stay motion is filed, your chances of success would be enhanced if you had given the court a chance to act without being under the gun, so to speak, of having a plant about to go into full power almost immediately.

I don't know, it's a question of judgment. I don't know whether a stay will be granted or not. I don't know, you can't quantify exactly how this will be influenced.

We are prepared to file whatever papers are necessary. Sheldon?

MR. TRUBATCH: I remind you that in Diablo Canyon there was a housekeeping stay.

MR. MALSCH: That's right, there was a housekeeping stay.

COMMISSIONER BERNTHAL: Yes, but I don't think that is in fact part of the reason why I asked for your opinion. Those are not parallel circumstances and there is the question of whether we should have a totally consistent practice, no matter what, or whether one should tailor a practice to fit the circumstance. I don't think anybody would argue that this and Diablo Canyon are parallel circumstances.

MR. TRUBATCH: If memory serves me, at Clinch River

there also was a housekeeping stay. If the circumstances --

COMMISSIONER BERNTHAL: I don't believe Clinch River is a parallel circumstance either.

MR. TRUBATCH: But parallel is how much time you give the court to read papers. And if they feel that there is something important being raised, are they going to let the plant go anyway or are they going to say, "Well, we'll stay it for a couple of days while we read the papers."

COMMISSIONER BERNTHAL: Well, let me ask this: What's the up side and the down side, and what would your recommendation have been, 24 hours, or is it immaterial? What are you saying?

MR. MALSCH: What our original concept was, if the Commission wished to go along these lines, we were talking about a 24-hour delay during which time, if a motion for a stay is filed with the Court of Appeals, then the Commission's authorization would be -- effectiveness would be deferred for another four working days.

MR. TRUBATCH: We appreciate that every day of non-operation is very expensive. The down side we see is that if a housekeeping stay is issued, then there is the possibility that that housekeeping stay might be longer than the stay the Commission would build into its order.

COMMISSIONER ASSELSTINE: In fact, previous housekeeping stays have been longer.

MR. TRUBATCH: Because then you have a situation where the plant is down and the world is still turning, and so if the court takes another two days to read the papers --

COMMISSIONER BERNTHAL: Well, I think I'm going to stick with my earlier position on it, Joe. And the reason is that I don't hear a very convincing argument here that in the special circumstances we have here the parallel cases you cite are not parallel in my judgment. You had claimed they were, I guess. But the other cases simply were quite different and it seems like it's a small point.

CHAIRMAN PALLADINO: Okay.

COMMISSIONER ASSELSTINE: Joe, I had just one other comment. With regard to the concerns that Mr. Guild raised, it does seem to me that -- and part of my basis for saying that the operation of the plant could go ahead is, although I think these are all valid issues, they will be considered by the Appeal Board as part of the merits review and ultimately by the Commission itself in terms of the substance of these concerns as well as the procedural concerns.

And also, it does seem to me that the intervenors have had an opportunity in this case to request a stay from the Appeal Board and that's been acted upon.

So, for myself at least I did not see a sufficient basis to hold up operation of the plant until those matters are further resolved.

CHAIRMAN PALLADINO: All right, thank you. Anything more on this issue, anything more to come before us?

COMMISSIONER ZECH: No.

COMMISSIONER ROBERTS: No.

CHAIRMAN PALLADINO: Well, then thank you very much. We will stand adjourned.

(Whereupon, at 12:45 p.m., the meeting of the Commission was adjourned.)

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the UNITED STATES NUCLEAR REGULATORY COMMISSION in the matter of:

NAME OF PROCEEDING: Discussion/Possible Vote on Full Power License for Catawba-1 Public Meeting

DOCKET NO.:

PLACE: Washington, D.C.

DATE: January 17, 1985

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

(sigt) M. E. Haussler

(TYPED)

Official Reporter

Reporter's Affiliation

COMMISSION BRIEFING

CATAWBA, UNIT 1

FULL POWER

DECEMBER , 1984

CONTACT:
K. JABBOUR
X27800

SLIDE 1

CATAWBA 1

BRIEFING OUTLINE

- LICENSEES/PLANT BACKGROUND
- OVERVIEW
- INSPECTION PROGRAM
- SHIFT STAFFING
- CONCLUSION

LICENSEES/PLANT BACKGROUND

- MULTIPLE OWNERS AND LICENSEES
  - DUKE POWER COMPANY (25%)
  - NORTH CAROLINA ELECTRIC MEMBERSHIP CORPORATION (56.25%)
  - SALUDA RIVER ELECTRIC COOPERATIVE, INC. (18.75%)
- DUKE POWER COMPANY OPERATOR AND AGENT FOR OTHER OWNERS
- PLANT DESIGN
  - WESTINGHOUSE PWR - 3411 MWT (1145 MWE)
  - ICE CONDENSER CONTAINMENT
  - SAFE SHUTDOWN FACILITY
- A/E AND CONSTRUCTOR: DUKE POWER COMPANY
- SITE
  - LOCATED AT LAKE WYLIE, YORK COUNTY, SOUTH CAROLINA
  - NEAREST CITY - ROCK HILL, SOUTH CAROLINA (6 MILES)

    POPULATION - 35,344 (1980)
  - POPULATION CENTER - CHARLOTTE, NORTH CAROLINA (11 MILES TO CITY LIMITS)

    POPULATION - 314,477 (1980)
- OFFSITE EMERGENCY PLANNING
  - EMERGENCY EXERCISE
  - FEMA EVALUATION

SLIDE 3

OVERVIEW

- FSAR REVIEW
  - HYDROGEN MITIGATION
  - ONSITE POWER SUPPLIES (TDI DIESELS)
- TECHNICAL SPECIFICATION
- OL HEARING
  - BIFURCATED HEARING
  - ASLB AUTHORIZATION TO ISSUE FUEL LOADING AND PRECRITICALITY TESTING LICENSE
- INSPECTION PROGRAM
- SALP
- SHIFT STAFFING
  - ADVISORS ON SHIFT
  - LENGTH OF SHIFT
- OPERATING EXPERIENCE
- ALLEGATIONS

INSPECTION PROGRAM

- CONSTPUCTION INSPECTION PROGRAM
- PREOPERATION/OPERATION INSPECTION PROGRAM
- SPECIAL INSPECTIONS
  - CONSTRUCTION ASSESSMENT
  - SELF-INITIATED EVALUATION FOLLOWUP
  - TECHNICAL SPECIFICATIONS REVIEW
  - PROCEDURES REVIEW
  - TRAINING ASSESSMENT
  - APPENDIX R
  - NUREG-0737 IMPLEMENTATION
  - EMERGENCY PREPAREDNESS
- READINESS REVIEW PANEL

SLIDE 5

SHIFT STAFFING

- 4 SHIFTS THROUGH STARTUP PROGRAM
- 5 SHIFT ROTATION/12 HR SHIFTS
- NO OPERATORS HAVE 6 MOS HOT OPERATING EXPERIENCE
- SHIFT ADVISORS (7) MEET INDUSTRY STANDARDS

SHIFT COMPOSITION	STAFF	AVG. MOS. NUCLEAR EXPERIENCE
SHIFT SUPV. (SRO)	5	104
UNIT SUPV. (SRO)	5	78
NUCLEAR CONTROL OPER (RO)	15	53
SHIFT TECHNICAL ADVISOR (SRO)	8	33
OTHER:		
SHIFT OPER ENGR (SRO)	1	72
OPER ENGR (SRO)	2	80
TRAINING STAFF (SRO)	3	-

TOTAL LICENSED:

SRO 24

RO 15

CONCLUSION

STAFF CONCLUDES THE LICENSEES SATISFY ALL THE REQUIREMENTS FOR ISSUANCE OF A FULL POWER LICENSE

12/82

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Meeting Title: dis/poss. Vote on Full Power Operating License for Catawba-1

Meeting Date: 1/17/85 Open X Closed ___

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